

INCO 1977 ANNUAL REPORT

INCO LIMITED

INCO Limited

Principal Executive Offices

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Other Executive Offices

One New York Plaza, New York, N.Y. 10004, U.S.A. (212) 742-4000

Principal subsidiaries or operating units

Inco Metals Company

1 First Canadian Place, Toronto, Ontario M5X 1C4

Inco United States, Inc.

One New York Plaza, New York, N.Y. 10004, U.S.A.

The International Nickel Company, Inc.

One New York Plaza, New York, N.Y. 10004, U.S.A.

Inco Europe Limited

Thames House, Millbank, London, SW1P 4QF, England

P.T. International Nickel Indonesia

Jalan Melawai V1 / 8, Kebayoran Baru, Jakarta, Indonesia

Exmibal

Edificio Valenzuela, 14 Calle 6-12, Zona 1, Guatemala City, Guatemala

Huntington Alloys, Inc.

Huntington, West Virginia 25720, U.S.A.

Henry Wiggin & Company Limited

Holmer Road, Hereford, HR4 9SL, England

Daniel Doncaster & Sons Limited

Birley House, Wadsley Bridge, Sheffield, S6 1ET, England

ESB Ray-O-Vac Corporation (formerly ESB Incorporated)

5 Penn Center Plaza, Philadelphia, Pennsylvania 19103, U.S.A.

Other subsidiaries include

Canada

Canadian Nickel Company Limited, Toronto

International Sales Limited, Toronto

United States

The International Metals Reclamation Company, Inc.

Ellwood City, Pennsylvania

Pittsburgh Pacific Processing Co.

Pittsburgh, Pennsylvania

American Copper & Nickel Company, Inc., New York

Europe

International Nickel B.V., The Hague

International Nickel Deutschland G.m.b.H., Düsseldorf

International Nickel France S.A., Paris

International Nickel Iberica Limited, Madrid

International Nickel Italia S.p.A., Milan

International Nickel Océanie, S.A., Paris

International Nickel UK Limited, London

Wiggin Alloys S.A., Brussels

Wiggin Alloys G.m.b.H., Düsseldorf

South America

International Nickel do Brasil Comercial Ltda., Sao Paulo

Mineração Serras do Sul Ltda., Rio de Janeiro

Asia

Inco East Asia Ltd., Tokyo

International Nickel Japan Ltd., Tokyo

Australia

International Nickel Australia Limited, Melbourne

Counsel

Osler, Hoskin & Harcourt

Toronto, Ontario

Sullivan & Cromwell

New York, N.Y.

Auditors

Price Waterhouse & Co.

Toronto, Ontario

New York, N.Y.

Transfer agents for the Common Shares

Canada Permanent Trust Company

Toronto, Ontario and Calgary, Alberta

The Royal Trust Company

Montreal, Quebec

Morgan Guaranty Trust Company of New York

New York, N.Y.

The Royal Trust Company of Canada

London, England

Registrars for the Common Shares

Montreal Trust Company

Toronto, Ontario; Montreal, Quebec; and Calgary, Alberta

Morgan Guaranty Trust Company of New York

New York, N.Y.

Lloyds Bank Limited

London, England

Transfer agent and registrar for the 7.85% Preferred Shares Series B

Canada Permanent Trust Company

Toronto, Ontario; Montreal, Quebec; Calgary, Alberta;

and Winnipeg, Manitoba

INCO Limited 1977 Annual Report

This Annual Report reflects the completion in 1977 of the organization of the Company's business around its three principal product groups: primary metals, formed metal products, and batteries and related products.

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Parent and Principal Subsidiary Companies	Inside front cover
Counsel, Auditors, Transfer Agents and Registrars	Inside front cover

Annual Meeting

The Company's Annual Meeting will be held in Toronto on April 19, 1978.

La version française de ce rapport sera fournie sur demande.

Message to Shareholders

Last year our Message to Shareholders stated that 1977 was expected to be a better year than 1976. However, instead of the anticipated improvement, there was a progressive deterioration in Inco's nickel business, which we dealt with in our quarterly reports to you and which continued into the fourth quarter. Thus, 1977 turned out to be one of the most disappointing years in your Company's long history.

In other sections of this Annual Report—particularly in the Financial Review—many matters of interest to shareholders are discussed, but because of its overriding influence on your Company's unsatisfactory performance in 1977, we will in this message concentrate on the state of the nickel industry in general and Inco's nickel business in particular.

Since 1974, production of nickel has greatly exceeded consumption. In 1977, the combination of weak demand and excessive supply, coupled with the efforts of newer producers to establish market share in a market substantially smaller than that anticipated when they decided to enter the industry, precipitated fierce competition and significant price deterioration.

Inco determined to be fully competitive, and at mid-year discontinued posting prices for its primary nickel products. However, the unfortunate corollary is that Inco's current average net realized price is at substantially the level of 1975 and well below the levels of 1976 and 1977 despite the very heavy increases in costs which have occurred in the interim.

Inco's total 1977 deliveries of 312 million pounds of nickel in all forms were at the lowest level since 1958. As a result, Inco's already substantial inventories of finished primary nickel rose further to 341 million pounds at year-end. This compares with a normal operating requirement of about 100 million pounds.

While Inco's Indonesian and Guatemalan projects achieved limited production of nickel matte in 1977, they contributed no finished nickel to these inventories, which consist entirely of nickel from Canadian sources. The magnitude of these inventories is attributable directly to Inco's policy, referred to in numerous previous reports to shareholders, of seeking to maintain relatively stable employment in the communities in which it produces. This policy could be pursued only



J. Edwin Carter



Charles F. Baird

so long as there was reason to believe that the excess inventory could be sold within the particular business cycle and as our financial resources permitted. In 1977, it became apparent that Inco could no longer afford or justify building additional stocks of nickel, and hence that its levels of production and, regrettably, employment in Canada and elsewhere could no longer be maintained.

Your Company has faced up to the unforeseen and unexpected, but unquestionably altered, conditions in the nickel industry, and has modified or reversed long-standing policies which, while based on sound judgments grounded in past knowledge and experience, were no longer appropriate in these altered conditions.

The formation in the second quarter of last year of Inco Metals Company was a step which enabled us to deal more efficiently with depressed market conditions and tough competition as they subsequently intensified. We have streamlined our marketing organizations, adopted more realistic and competitive marketing policies and have arranged for curtailments at our production facilities worldwide—essential actions to stem the buildup in our excess inventories and commence in due course the orderly liquidation of those inventories.

Sharply reduced revenues from our

primary metals business, principally as a result of substantially reduced nickel deliveries, deteriorating margins for nickel and totally inadequate copper prices—coupled with large continuing capital expenditures and fast-growing investment in nickel inventories—led to a severe and unsustainable strain on our financial resources. Our primary objective, consequently, has to be conservation of cash and maintenance of a sound financial position.

Cash conservation actions have not been confined to Inco Metals. They have been implemented throughout the Inco organization. Planned capital expenditures have been sharply reduced. Operating expenditures are being brought under even tighter control. This has led inevitably to unfortunate but essential reductions in employment. Additionally, your Board of Directors decided last October that present and forecast future conditions required that the amount of the regular quarterly dividend on common shares be substantially reduced commencing in the fourth quarter and that no extra dividend be paid in 1977.

To sustain our financial strength and improve the financial ratios so important to your Company's credit standing, we successfully completed the equity and debt financings described in the Financial Review.

Many of the actions taken have involved difficult decisions. This is particularly true of the reduction in employment at many Inco locations in countries around the world. We regret the impact on the individuals affected, the loss to Inco of their skills and the consequential effect on the communities in which we operate. It is true, however, that these communities, specifically those in Canada, have greatly benefitted over an extended period from the maintenance of Inco production and employment at levels which, by hindsight, were not justified. Equally painful has been the decision to reduce the dividends payable to Inco's shareholders.

Facing the realities of the nickel industry and the world economy today, Inco can and must fight for its position in the marketplace. As in any other contest, one competes best when one is in good health. It is vital to the interests of our shareholders, as well as to those of our employees, that Inco be in the

Results in Brief

(in thousands except where noted by asterisk)	1977	1976
Net sales	\$1,953,328	\$2,040,282
Net earnings	\$ 99,859	\$ 196,758
Per common share*	\$1.24	\$2.64
Common dividends paid	\$ 93,241	\$ 119,323
Per common share*	\$1.25	\$1.60
Income and mining taxes	\$ 75,494	\$ 150,421
Capital expenditures	\$ 432,837	\$ 459,056
Ore mined (short tons)	19,600	19,800
Nickel deliveries (pounds)	312,320	409,830
Copper deliveries (pounds)	341,200	355,990
Platinum-group metals and gold deliveries (troy ounces)	438	554
Employees*	56,922	55,767
Common shareholders*	77,875	78,014

Dollar figures in this Report are expressed in United States currency, unless otherwise stated.

best possible condition to engage in the very tough competitive struggle which exists in the nickel industry and will continue.

A special committee of the Ontario Legislature was formed to inquire into the various factors and considerations which led to our decisions to announce last October the production curtailments and layoffs at our Ontario operations, which have taken place or are taking place this year. This public inquiry into the specifics of the business judgments and decisions of a private company in a particular individual instance may well be an unprecedented political action, which has troubled many in Canada and abroad, including many in governments. It has, however, provided us with a forum to deal with the facts of international economic life as they relate to the nickel industry, and we believe that this has contributed to better public and governmental understanding of these facts. We trust that the committee's final report and recommendations will be realistic and constructive.

The statement which we made to the committee last December dealt at length and in detail with conditions in the nickel industry in general and Inco's nickel business in particular, with the origin of these conditions and with the outlook for the future. This comprehensive statement has been made available on request to all shareholders. Many thousands of you have requested

copies of the statement, which is a most gratifying response.

We must note, however, that, if Inco is to support and benefit the jurisdictions in which it operates, it must operate in an equitable and realistic business climate. In Canada, in particular, there is a greater need than ever before for stable long-term policies, including tax policies, that will ensure reasonable rates of return in the resource sector, reasonable environmental constraints, realistic export controls and sensitivity to the effect of ever-rising costs. We hope that these policies will be forthcoming and that they will be wisely implemented.

Looking to the future, we believe there will be some increase in the demand for nickel in 1978, but it continues to be extremely difficult to foresee market developments.

Considering the size of producer inventories throughout the world, restoration of a healthy supply-demand balance in the world nickel market may take some time. How much time depends on the rate of recovery in demand and the extent to which producers reduce production. While we do not yet see evidence of a resurgence in demand, we have noted substantial curtailments of production by many other primary nickel producers in the face of their excessive inventories.

We approach with caution the question of future growth rates in nickel consumption. In the period 1946 to 1976, consumption of

nickel grew at an average annual rate of 6 per cent. However, recent events indicate that there may be a reduction in this rate of growth over the next decade. In the industrial countries, long-term economic growth rates may have been reduced, among other factors, by the OPEC oil crisis, by the resulting transfer of financial resources from the industrial economies to the OPEC nations, by the apparent increase in the level of inflation imbedded in the industrial economies and by the increasing impact of environmental regulations. If this should be the case, the long-term rate of growth in nickel consumption will be also lowered.

At present, total nickel production capacity in the non-communist world is about 1,500 million pounds per year, including Inco's approximately 460-million-pound Canadian capacity, as it is currently limited by environmental constraints. By 1980, the total capacity could rise to about 1,700 million pounds annually, including the approximately 130-million-pound capacity of Inco's Indonesian and Guatemalan projects. Such capacities are far above current needs, but we remain convinced that nickel is not going out of style and that in the future full-capacity production from our Canadian operations, as well as from our projects in Indonesia and Guatemala, will be needed to meet an increasing world nickel demand and, indeed, over the longer term will be insufficient to do so.

In the meantime, we are confident that the actions which we have taken, and the additional ones which we are fully prepared to take if circumstances require, will maintain Inco as the most commercially reliable and economically efficient nickel producer in the world.

J. Edwin Carter

Chairman and Chief Executive Officer

Charles F. Brand

President

February 16, 1978

but declined in each of the third and fourth quarters, and for the full year was \$2.17, compared with \$2.15 in 1976.

The decrease in copper sales reflects the modest decline in deliveries and slightly lower prices. The Company realized 63 cents a pound, on average, for copper in 1977, compared with 65 cents a pound in 1976.

Deliveries of rolling mill products in 1977 were slightly lower than the previous year but total sales of formed metal products increased as a result of improved prices.

Sales of batteries and related products and other products reflect record sales in 1977 by ESB Ray-O-Vac and represent an increase of 18 per cent over the previous record in 1976. Approximately one-third of the increase in ESB Ray-O-Vac's sales was contributed by AB Tudor of Sweden, a company acquired on January 31, 1977, with the balance of the increase attributable principally to higher prices.

Total costs for the year were \$1,400 million, compared with \$1,325 million in 1976, an increase of 6 per cent. This increase reflects the continued escalation in labor, supply and energy costs, partially offset by the lower volume of business. Costs for the year were also adversely affected by a required provision for separation costs related to employment reductions, principally in the primary metals business. Most of these employment reductions occurred early in 1978.

Income and mining tax expense declined from \$150 million in 1976 to \$75 million in 1977 consistent with the decline in pretax earnings. Benefits in 1977 from higher investment tax credits and the introduction of an inventory allowance in Canada were largely offset by the effects of currency translations. Accordingly, the Company's effective income and mining tax rate for 1977 was 43 per cent, the same as in 1976.

Currency translation adjustments increased 1977 earnings by \$17.6 million, or 24 cents a share, and were attributable principally to the decline in value of the Canadian dollar, partly offset by the appreciation in the value of the pound sterling. In 1976, the adjustment resulted in increased earnings of \$2 million, or three cents a share, reflecting mainly a decline in the value of sterling almost entirely offset by an increase in the Canadian dollar.

Capital expenditures in 1977 totalled \$433 million, compared with \$459 million in 1976. Approximately two-thirds of the 1977 expenditures were for the Indonesian and Guatemalan projects, which were financed

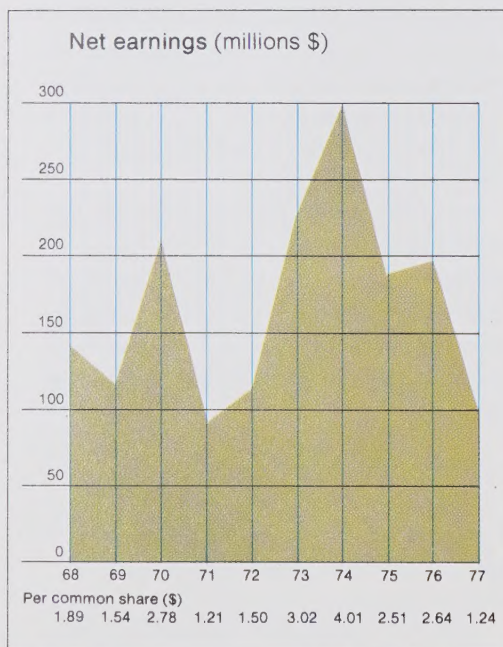
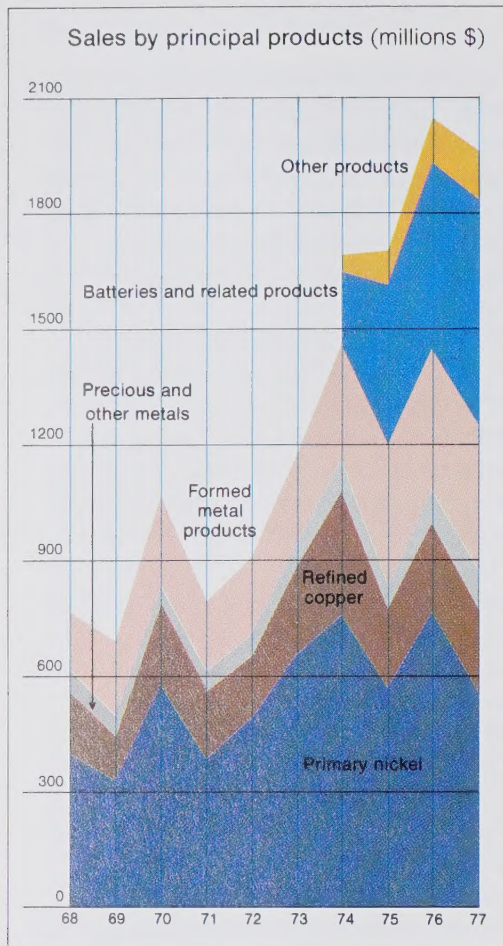
Financial Review

Net earnings in 1977 were \$99.9 million, or \$1.24 a common share, compared with \$196.8 million, or \$2.64 a share, in 1976. Major factors contributing to this decline were lower deliveries of nickel and platinum-group metals, lower prices for copper, higher unit costs in the primary metals and formed metal products businesses and a decline in ESB Ray-O-Vac's contribution to earnings, primarily due to nonrecurring factors. These adverse factors more than offset benefits from improved prices for rolling mill products and platinum-group metals, and from currency translation adjustments.

Net sales for the year were \$1,953 million, compared with \$2,040 million in 1976, a decrease of 4 per cent. Sales by principal products in the two years were:

	1977	1976
	(in millions)	
Primary nickel	\$ 558	\$ 762
Refined copper	211	227
Precious metals	63	57
Other primary metals	37	31
Total primary metals	869	1,077
Formed metal products	377	365
Batteries and related products	585	486
Other products	122	112
Total	\$1,953	\$2,040

The decrease in primary nickel sales was almost entirely attributable to reduced deliveries. Primary nickel deliveries were 257 million pounds in 1977, compared with 354 million pounds in 1976, a decrease of 27 per cent, due principally to intensely competitive conditions during a period of depressed levels of demand stemming from unexpected weakness in key nickel-consuming capital goods spending, increased utilization of nickel-containing scrap by consumers, and the reduction of nickel inventories held by consumers. Total nickel deliveries, including nickel contained in deliveries of formed metal products, were 312 million pounds in 1977, a decrease of 24 per cent from the 1976 total nickel deliveries of 410 million pounds. The average net price per pound realized by the Company for its various primary nickel products in 1977 increased modestly in the first half of the year



to a great extent by long-term loans arranged by the Company's Indonesian and Guatemalan subsidiaries. The major portion of the balance of the year's capital expenditures was spent in Canada. In 1978, capital expenditures will decline sharply to approximately \$220 million with the expected physical completion of the second stage of the Indonesian project.

Inventories increased from \$880 million at December 31, 1976 to \$1,081 million at year-end 1977 largely as a result of additional accumulation of nickel. Finished nickel inventory totalled 341 million pounds at year-end, considerably in excess of the 100-million-pound level considered normal.

In 1977, the Company took corrective actions to slow and reverse the deterioration in its primary metals business and to maintain its financial strength. The objective of these actions was to conserve cash. Production curtailments and marketing actions are discussed fully in other sections of this Report. In addition, on October 20, 1977, the Board of Directors reduced the quarterly dividend payable December 1, 1977 on the common shares from 35 cents to 20 cents a share. The Board did not declare an extra dividend in 1977 although an extra dividend of 20 cents a share had been paid in the fourth quarter of each of the previous two years. In 1977, the Company paid dividends on common shares of \$93.2 million, or \$1.25 a common share, compared with \$119.3 million, or \$1.60 a share, in 1976.

At the Annual Meeting held April 20, 1977, the shareholders sanctioned Bylaw W which changed the share capital of the Company by increasing the authorized number of both the Class A Common Shares and Class B Common Shares from 90 million to 100 million shares each, and by creating a new class of 30 million preferred shares which are issuable in series. In May 1977, the Company sold 10 million Series A Preferred Shares to a limited number of Canadian institutional investors for \$250 million (Cdn.). These shares have a cumulative floating rate dividend equal to half the Canadian prime rate plus 1 1/4 per cent. The shares are retractable at par at the option of the holders in 1987. In December 1977, the Company sold five million 7.85% Series B Preferred Shares to the public in Canada for \$125 million (Cdn.). The Series B Preferred Shares carry general voting rights and are cumulative as to dividends. Commencing with dividends payable on June 1, 1978, the Series B Preferred shareholders may elect to receive in lieu of a cash dividend, a dividend of equivalent value in Series B Preferred

Shares for a period of two years or common shares for a period of five years. In 1977, the Company paid dividends of \$7.5 million on the Series A Preferred Shares.

In early January 1978, the Company raised \$150 million in the Eurobond market through the issue of \$50 million 8 1/4 % Notes due in 1984 and \$100 million 9% Debentures due in 1992.

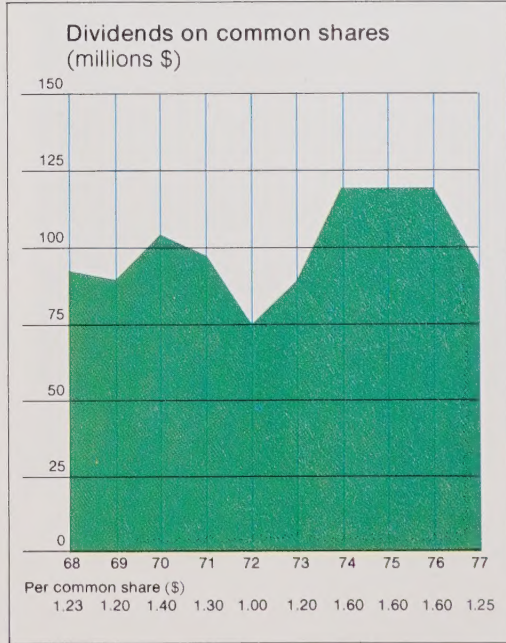
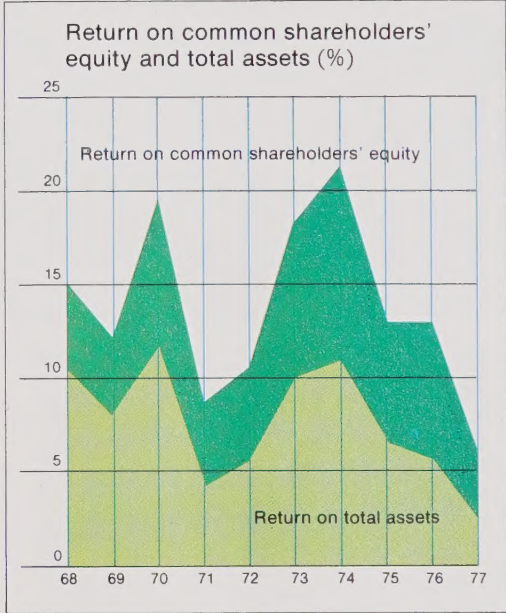
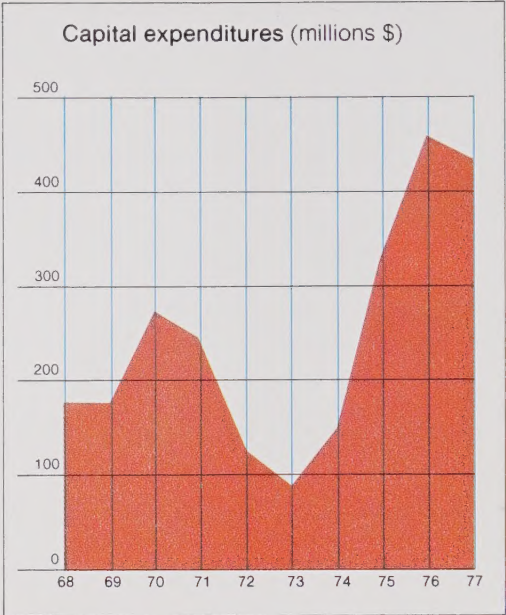
The principal objective of these three long-term financings was to improve the Company's financial position by applying the proceeds to reduce short-term debt. As a result of the successful conclusion of these financings, the Company is in a significantly better position to meet its financial requirements and to face the uncertainties of the current economic environment.

The Company's rate of return on total assets declined from 5.4 per cent in 1976 to 2.5 per cent in 1977. Return on common shareholders' equity declined from 12.6 per cent in 1976 to 5.9 per cent in 1977. These rates of return for 1977 have been adversely affected to a very significant extent by the sharp reduction in earnings and also by the substantial investments in excess nickel inventories and in new capacity represented by the Indonesian and Guatemalan projects which are not yet in commercial production.

The returns on total assets and on common shareholders' equity, based as they are on financial information expressed in terms of historic costs, fail to take into account the erosive effects of inflation on real profitability. In a period of rapid inflation, historic cost accounting generally results in earnings which are overstated and asset values which are understated. This is a particularly severe problem for the capital-intensive mining industry as it becomes increasingly difficult to generate sufficient funds to finance the replacement and expansion of productive facilities, replenish inventories, and service debt and equity capital.

Various governmental agencies and professional accounting bodies in several countries where the Company conducts its business have made proposals for changes in financial reporting, which would attempt to measure the effect of inflation on financial results. A recent proposal of merit is incorporated in the report of the Ontario Committee on Inflation Accounting of June 1977.

While the Company supports these efforts, the proposals to date do not appear to justify the inclusion in this Report of inflation-adjusted financial statements supplementary to the conventional financial



statements, since the adoption of any system, which is not uniformly implemented for all companies, might serve only to confuse the users of financial statements.

The antitrust suit brought by the U.S. Department of Justice to challenge the Company's acquisition of ESB Ray-O-Vac Corporation was terminated by entry of a court-approved consent decree on January 30, 1978. The decree permits Inco to retain ownership of ESB Ray-O-Vac. It requires Inco to grant licenses of certain battery-related patents and know-how and to grant to licensees, under specific conditions, an immunity from suit in respect of other patents. The patents and know-how relate to a specialized use of metallic foil for battery electrodes. The decree also imposes restraints for 10 years on further acquisitions of certain battery manufacturers as defined in the decree.

On February 6, 1978, the Board of Directors declared a quarterly dividend of 20 cents a common share, payable March 9 to Class A and Class B shareholders of record on February 16. The dividend on the Class B Common Shares was declared payable out of "1971 capital surplus on hand" as defined in the Income Tax Act of Canada.

The Board of Directors on February 6 also declared a quarterly dividend at an annual rate of 5.375 per cent on the Company's floating rate Series A Preferred Shares, payable March 1 to shareholders of record on February 17 and declared the initial dividend on the Company's 7.85% Series B Preferred Shares, payable March 1 to shareholders of record on February 14.

Amendments made to the Income Tax Act of Canada in December 1977 will terminate the Company's ability to pay "tax deferred" dividends on the Class B Common Shares out of "1971 capital surplus on hand" after December 31, 1978. Such amendments also provide tax benefits to certain recipients of stock dividends. As a result, shareholders will be asked, at the Company's Annual Meeting on April 19, to approve a bylaw which reclassifies the Company's Class A and Class B Common Shares as one class of Common Shares, expected to be effective January 1, 1979, and which provides also that the Company may offer holders of common shares the right to elect to receive, in lieu of a cash dividend, a stock dividend in the form of common shares commencing in 1979. Full details of this bylaw will be contained in the Company's 1978 Information Circular and Proxy Statement, which will be mailed to shareholders early in March 1978.

The sectors of the primary metals industry in which Inco operates were characterized in 1977 by low demand, weak prices and fierce competition in all market areas.

Earlier expectations for an improved market for nickel, based in particular on capital expansion in such key nickel-consuming areas as the petrochemical and process industries, were not fulfilled. As a consequence, the Company's finished nickel inventory reached a record high level, necessitating curtailment of production by Inco Metals Company, the primary metals production and marketing unit of Inco Limited.

Inco Metals began to reduce production gradually early in 1977, primarily by not replacing all employees lost through attrition at the Ontario and Manitoba operations. Inventories continued to build, however, and the Company was forced to announce in October a major curtailment of its nickel production worldwide for 1978.

As a result of nickel production cutbacks, action was initiated during the year to reduce employment levels in all areas of Inco Metals activity through attrition, early retirement incentive programs and layoffs.

Marketing

A comparison of Inco's primary metals marketing results in 1977 and the previous year is shown in the tables to the right.

Nickel

Inco's total nickel deliveries of 312.3 million pounds were 24 per cent below the 1976 level of 409.8 million pounds. Both figures include nickel contained in the Company's formed metal products delivered to customers.

The factors particularly responsible for the precipitous drop were intense competition in the marketplace, falling stainless steel production, a resultant abundance of stainless steel scrap at declining prices, the availability of nickel from merchants at discount prices and the drawing down by consumers of their own primary nickel inventories by about 70 million pounds as they reacted to lower than expected demand and ready access to nickel at lower prices.

The average net price per pound of primary nickel realized by Inco in 1977 was \$2.17, compared with \$2.15 a pound in 1976 and \$2.00 a pound in 1975.

As a consequence of weak market conditions, intense price competition prevailed throughout the year. Because of

Sales	1977		1976	
	(dollars in thousands)			
Primary nickel	\$557,924	64%	\$ 761,996	71%
Refined copper	211,101	24	226,610	21
Precious metals	63,276	7	56,852	5
Other	37,292	5	31,929	3
Total	\$869,593	100%	\$1,077,387	100%

Deliveries	1977	1976
	(in thousands)	
Primary nickel	257,210	353,750
Nickel in formed metal products	55,110	56,080
Total nickel (pounds)	312,320	409,830
Copper (pounds)	341,200	355,990
Platinum-group metals* and gold (troy ounces)	438	554
Silver (troy ounces)	2,150	1,190
Cobalt (pounds)	1,660	2,430
Iron ore (long tons)	638	477
*Platinum, palladium, rhodium, ruthenium and iridium.		

this situation, the increased prices for Inco's primary nickel products, which were announced to go into effect on October 1, 1976, were never fully realized. Those published prices were \$2.41 a pound for electrolytic nickel and nickel pellets, and \$2.27 for nickel oxide sinter 75 and \$2.31 for INCOMET® nickel, per pound of contained nickel.

To improve sales, Inco in April 1977 reduced its posted prices on certain nickel products, on a temporary basis, to a level below that of October 1, 1976. Sales did pick up, and in due course posted prices were restored to the October 1 level. In July, however, in the face of ever-increasing pressure on prices, Inco Metals discontinued publication of its nickel prices, which had become unrealizable and simply a target from which competitors discounted. The Company's policy with respect to pricing is to be competitive with other producers in all markets in which it operates.

The shift in demand from high-purity nickel to less costly forms of nickel continued in 1977. In keeping with this trend, the Port Colborne, Ontario, refinery began producing two new Inco-developed Class 2 products, UTILITY® nickel pig and shot, in May 1977. These products have gained increasing market acceptance.

From the end of 1974 to the end of 1977, the Company produced some 264 million pounds more finished nickel than it sold. At year-end 1977, Inco Metals' inventory of finished nickel available for sale stood at



Top: Inco Metals developed and is successfully marketing UTILITY nickel shot and pig, which went into commercial production at Port Colborne in May 1977.

Bottom: The Inco Power Conference in Switzerland drew 200 delegates from 14 countries. This was one of many marketing-oriented activities in major industrial areas during the year.



Above: This Port Colborne stockpile, containing 40 million pounds of finished primary nickel products, is part of the 341 million pounds in Inco's inventory at year-end.

341 million pounds; a normal inventory is considered to be about 100 million pounds.

The wide gap that existed between nickel production and demand in the non-communist world during 1977 is expected to narrow in 1978 as the result of actions taken by virtually every major producer.

Copper

Deliveries of 341 million pounds of ORC® copper in 1977 were 4 per cent lower than in 1976, reflecting reduced production of copper by Inco Metals as a consequence of lower nickel production.

Despite worldwide oversupply and high inventories, copper prices increased in the first quarter of 1977 because of concern over future supplies from Central Africa and anticipation of a long industry-wide strike (which did not materialize) against producers in the United States. The London Metal Exchange (LME) price rose from 62.4 cents a pound (January 4) to 70.3 cents (late March), then trended downward to a low of 51 cents (late August), followed by a slow recovery to 57.6 cents at year-end. The Canadian producer price for wirebar increased from 67.125 cents (Cdn.) a pound in four stages to reach 78.375 cents (Cdn.) on March 28; subsequently, four consecutive decreases reduced the price to 65.125 cents (Cdn.) in August 1977. In late December, the price recovered somewhat to 69.75 cents (Cdn.).

Inco, which markets ORC copper in Canada at the producer price and in Europe at prices based on LME quotations, realized an average price of 63 cents a pound in 1977, compared with 65 cents a pound in 1976.

Precious Metals

The tables on page 7 give a comparison of 1977 and 1976 deliveries and sales of the platinum-group metals and gold and of silver. Sales exceeded the levels of 1976 by approximately 11 per cent, principally because higher prices were realized for all precious metals in 1977.

Production

Nickel

In an attempt to help stem inventory buildup and reduce cash outlay, Inco announced in July 1977 that it was reducing the year's production by not replacing all employees lost through normal attrition at the Canadian operations, which were the source of all the

finished nickel in the Company's inventory. A further cut in Inco's nickel production for 1978, on the order of 15 per cent, was announced on October 20, 1977.

Inco's nickel production in 1977 amounted to 417 million pounds, compared with 462 million pounds in 1976.

The production curtailment early in 1978 regrettably resulted in employment being significantly reduced. Production and employment levels in 1978 will be lower than originally planned in Canada and at Inco's majority-owned operations on the island of Sulawesi in Indonesia and near Lake Izabal in Guatemala. As a result of the cutbacks, production at the Clydach refinery in Wales will be about 50 per cent of capacity in 1978.

Canada

Inco Metals is suspending or reducing operations at a number of its mines in Ontario and Manitoba. Except for the small, depleted Victoria mine in Sudbury, which will be permanently closed, the affected mines will be maintained on a standby basis so they readily may be brought back into production when conditions warrant.

In Ontario, operations were suspended at the Copper Cliff North mine and the Creighton No. 3 shaft early in 1978 and will be suspended at the Crean Hill mine in mid-1978. Production from the Stobie portion of the Frood-Stobie mine is being reduced. Development work at the Levack East mine was deferred in the third quarter of 1977. This mine had been scheduled to begin production in 1983.

In Manitoba, production at the Birchtree mine was suspended in December 1977. Development work at Pipe No. 2 shaft was suspended in July. Operations continue at the Thompson mine and the Pipe open pit mine.

Lower mine production is being reflected in reduced levels of activity at most surface plants—mills, smelters and refineries. In Sudbury, operations at the Levack mill have been suspended and the Frood-Stobie and Clarabelle mills are operating below capacity. At Thompson, mill operations were reduced at mid-year from seven days a week to five.

Refining operations have been proportionately reduced, and the older section of the tankhouse at Port Colborne, built in 1918, was shut down permanently in January 1978, with the discontinuance of regular electrolytic nickel production there.

Production of S-ROUNDS® electrolytic nickel continues in the newer section of the tankhouse.

In Ontario, there will be a summer vacation shutdown of operations at Sudbury, Port Colborne and Shebandowan from July 17 through August 13, 1978. The last such shutdown occurred in 1973.

At Sudbury, work began in mid-year on a new centralized shops facility. It will provide a machine shop, to replace the one destroyed by fire in 1977, and other maintenance shop support facilities for mines and plants in the Sudbury District. The centre core of the complex, which is scheduled for completion in late 1978, will cost about \$13 million.

Indonesia

The Soroako nickel project of P. T. International Nickel Indonesia was dedicated by President Suharto of the Republic of Indonesia on March 31, 1977. Limited quantities of nickel in the form of matte were produced in the fourth quarter of 1977, with the first shipments scheduled for Japan in early 1978.

The Indonesian project, which will eventually have a design capacity to produce at an annual rate of about 100 million pounds of nickel, consists of three process lines, as well as mining and ancillary facilities, including a town and other infrastructure. The project also includes a 165-megawatt hydroelectric plant that will supply all the electricity required by the project. Excess power will be available for distribution to nearby communities by the Indonesian government. Generation of hydro power began in January 1978, ahead of schedule. The over-all hydro system is expected to be completed before mid-year, also ahead of schedule and below estimated cost.

Mechanical and technical problems were encountered in the start-up phase of the first process line. The most serious difficulties involved refractory failure in the electric furnace and partial failure of the internal lifters in the pre-reduction kiln. The refractory problem has been overcome, and the kiln manufacturer, agreeing that the original design contained deficiencies, has contributed to the cost of improved lifters.

All expenditures relating to the development of the project have been capitalized. The first stage of the project has been physically completed and the second stage is expected to be completed by



Top: One of the larger models of electrically powered ore-moving vehicles now being tested underground at Sudbury. Electric vehicles are quieter, cleaner and require no fume ventilation.

Centre: President Kjell Eugenio Laugerud Garcia of the Republic of Guatemala dedicated the Exmibal nickel project at El Estor on July 12, 1977.

Bottom: On March 31, 1977, President Suharto of the Republic of Indonesia (third from right) dedicated the Soroako nickel project of P.T. International Nickel Indonesia.

mid-1978. Accordingly, starting at various times in 1978 with the expected successful completion of pre-operational testing of the facilities, interest on the direct project borrowings will be expensed as incurred. Production at a level approximating design capacity for the first stage is expected to begin in the second quarter of 1978. Production from the second stage, previously scheduled for late 1978, is now not expected to reach commercial levels before 1980. The project's total capital cost, if this timetable is met, is now estimated to be approximately \$850 million, including working capital requirements. The project is being financed one-third by equity and two-thirds by long-term debt. The latter is being provided by three international syndicates of commercial banks and through government agencies in the United States, Australia, Canada, Japan and several European countries.

Guatemala

The Exmibal project was dedicated on July 12, 1977 by President Kjell Eugenio Laugerud Garcia of the Republic of Guatemala. Construction was essentially completed in 1977, and at year-end all the mining and ore-processing facilities had been commissioned.

Plant modifications, correction of minor mechanical problems and operator training programs are scheduled to continue into 1978. A plant shutdown will be necessary in 1978 to complete the plant modifications and replace faulty kiln lifters. This will result in delays in reaching commercial production levels, and the total cost of the project, which has a planned annual production rate of 28 million pounds of nickel in matte form, is now

Officers

John McCreedy
Chairman and Chief Executive Officer
Donald J. Phillips
President and Chief Operating Officer
Walter Curlook
Senior Vice-President
Charles E. O'Neill
Senior Vice-President
Johannes P. Schade
Senior Vice-President
W. Roy Aitken
Vice-President
William A. Correll
Vice-President
William I. Gordon
Comptroller
Daniel Kelly
Vice-President
Philip E. McCarthy
Chief Legal Officer
Terrence Podolsky
Vice-President

Principal Marketing Operations

John H. Page
President
The International Nickel Company, Inc.
New York

Robin B. Nicholson
Managing Director
Inco Europe Limited, London

Dean D. Ramstad
President
Inco East Asia Ltd., Tokyo

J. A. Keith McPhail
General Manager
Canadian Marketing Division

Principal Production Operations

Ronald R. Taylor
President
Ontario Division, Sudbury

Winton K. Newman
President
Manitoba Division, Thompson

Philip C. Jessup, Jr.
President
P.T. International Nickel Indonesia
Jakarta

Joseph J. Borgatti
President
Exmibal, Guatemala City

Principal properties, plants, laboratories and products

Operating mines

Sudbury, Ontario—Coleman, Copper Cliff South, Crean Hill, Creighton, Frood-Stobie, Garson, Levack, Levack West, Little Stobie
Shebandowan, Ontario—Shebandowan
Thompson, Manitoba—Pipe, Thompson
Soroako, Indonesia
El Estor, Guatemala

Mines on standby

Sudbury, Ontario—Clarabelle, Copper Cliff North, Murray, Totten
Thompson, Manitoba—Birchtree, Soab

Concentrators

Sudbury, Ontario—Clarabelle, Copper Cliff, Frood-Stobie
Shebandowan, Ontario
Thompson, Manitoba

Concentrators on standby

Sudbury, Ontario—Creighton, Levack

Smelters

Sudbury, Ontario
Thompson, Manitoba
Soroako, Indonesia—Nickel matte
El Estor, Guatemala—Nickel matte

Iron ore recovery plant

Sudbury, Ontario—Iron ore and nickel oxide

Matte refining

Sudbury, Ontario—Nickel oxide sinter and INCOMET nickel

Refineries

Sudbury, Ontario—Nickel pellets and powders, copper, gold, silver, selenium, tellurium, semi-refined platinum-group metals and nickel sulphide
Port Colborne, Ontario—S-ROUNDS electrolytic nickel, UTILITY nickel shot and pig, foundry additives, semi-refined platinum-group metals, cobalt oxide
Thompson, Manitoba—Electrolytic nickel and cobalt
Clydach, Wales—Nickel pellets and powders, and nickel and cobalt salts and oxides
Acton (London), England—Platinum, palladium, rhodium, ruthenium and iridium

Research laboratories and pilot plants

Sheridan Park (Mississauga), Sudbury and Port Colborne, Ontario
Clydach, Wales

expected to be about 5 per cent over the previous estimate of \$224 million.

An initial trial shipment of nickel matte is expected during the first quarter of 1978. The matte will be available to potential purchasers, with the balance to be refined at the Company's Clydach facility, for sale primarily in Europe. The refined product will reach the marketplace in 1979.

The project is being financed with equity, long-term senior loans, subordinated advances and subordinated completion loans. Long-term senior loans, totalling approximately \$105 million, have been provided by banks and other financial institutions in various countries.

United Kingdom

A fluid-bed roaster and an associated sulphuric acid plant, which will make Inco the only nickel supplier with facilities to produce both Class 1 and Class 2 forms of nickel in Europe, are being built at the Clydach nickel refinery. The new plants are scheduled for completion in November 1978 at an estimated cost of \$18 million. About 40 per cent of the cost is being provided by U.K. government grants.

Construction of the plants began in July 1977. The roaster is designed to refine the nickel matte from the Indonesian and Guatemalan projects. The refinery gives European customers ready access to the refined products. A portion of the sulphuric acid produced at Clydach will be used there in the refining process; the balance will be sold to major U.K. chemical companies.

Copper

Inco's production of ORC copper in 1977 totalled 328 million pounds, compared with 345 million pounds in 1976. Since copper is associated with nickel in the sulphide ores that Inco mines in Canada, the cutback in nickel production affected copper production in 1977 and will reduce it further in 1978. There is no copper associated with the lateritic ores of P. T. Inco Indonesia and Exmibal.

Research and Development

Efforts during 1977 at Inco's process research laboratories and pilot plants at Sheridan Park, Port Colborne and Sudbury led to the following significant new and improved products:

UTILITY nickel—Inco's new Class 2 nickel available in pig and shot form for

steelmaking and foundry use—reached commercial production in May 1977 at the Port Colborne refinery through a joint effort of the Company's research and operating teams.

Briquetted nickel oxide sinter 75. Field tests of this dense, robust form of Inco's chief Class 2 nickel product are currently being conducted. Limited production of this new product, which is tailored specifically to steelmakers' needs, is under way at Sudbury.

Improved nickel electroplating anode materials, now in advanced stages of development, were test-marketed in the United States.

Pilot plant studies demonstrated the feasibility of a process for producing a new primary nickel-cobalt alloy as an additive in the production of superalloys. A decision whether to proceed with commercial production will be made in 1978.

In the area of process improvements, developments in 1977 include:

A new pressure-leaching/ electrowinning system to recover high-purity selenium and tellurium from precious metals concentrates.

A computer program to predict the ground level concentration of sulphur dioxide from prevailing atmospheric conditions and scheduled smelter operation. In this way, environmental problems are averted and production cutbacks are minimized.

Environmental Control

Inco Metals is substantially in compliance with regulations and orders governing its effluents at all its operations in Canada, Guatemala, Indonesia and the United Kingdom.

The Ontario Division continues to operate under the Ontario Ministry of the Environment Order of 1970, which calls for progressive reductions in sulphur dioxide emissions from the Copper Cliff smelter chimney. The final emission level in this order was to have become effective January 1, 1979, but the Ministry, in the fourth quarter of 1977, indicated its intention to alter this requirement.

The Division is continuing to evaluate the performance of specially designed gas-tight, water-cooled hoods recently installed on three converters in the Copper Cliff smelter to reduce in-plant and roof-level emissions of sulphur dioxide and dust.

The Manitoba Division is also operating under an environmental order limiting stack emissions, issued by the Manitoba Clean Environment Commission in 1975 and amended in 1976. This order was reviewed at a public hearing in December 1977. The results of the review will be disclosed by the Commission early in 1978.

An effluent treatment plant at Port Colborne has been approved by the Ontario Ministry of the Environment and will be constructed over the next several years at a cost of more than \$4 million. The plant is designed to treat all liquid effluents from the nickel refinery and research stations, as well as surface run-off water. It has a design capacity of nine million gallons a day, with a short-term peak flow capability, during times of heavy precipitation, of 14 million gallons a day.

Environmental monitoring programs have been established at the new operations in Guatemala and Indonesia. In Guatemala, an ecological baseline study for subsequent evaluation of the environmental effects of operations was completed. It was carried out over a two-year period under the direction of an independent Guatemalan consultant.

Routine monitoring of plant and mine effluents began at both operations. At both locations, too, programs to evaluate revegetation of the mining areas were begun. In Indonesia, revegetation is under way along the banks of the hydro canal. This work is being carried out by a domestic contractor, with technical supervision by an ecological team from Hasanuddin University.

Safety and Health

Inco Metals is substantially in compliance with the applicable occupational safety and health guidelines and standards prescribing in-plant working conditions. Computerized systems for recording individual work histories and in-plant environmental data are being developed. When complete, these will make it possible to establish the occupational exposure to a variety of substances of each individual working in Inco's primary metals plants.

In the United States, the Occupational Safety and Health Administration (OSHA) announced its intention to develop a revised standard for occupational exposure to nickel and its inorganic compounds. It is expected that proceedings on a proposed standard could begin late in 1978. Among the

information OSHA will consider is that contained in a "criteria document" on nickel published by the National Institute for Occupational Safety and Health (NIOSH) in May 1977. Inco, along with other producers and consumers of nickel, is conducting extensive reviews of worker health and is assessing the technical and economic feasibility of complying with more stringent controls to ensure that OSHA has access to the most complete information possible.

In Ontario, the Joint Occupational Health Committee, composed of representatives of Inco and of the Sudbury and Port Colborne locals of the United Steelworkers of America, proceeded with two major areas of activity during the year. Under the research direction of Dr. David Muir, Director of Occupational Health at McMaster University, Hamilton, Ontario, the Committee began a retrospective study of all men who worked in the Ontario Division for at least six months in the period July 1, 1949 to December 31, 1976. The Committee also participated in a study in the United States to review the effect of the use of diesel equipment underground on workers' health.

In Guatemala and Indonesia, programs for monitoring the workplace environment were established for implementation beginning in 1978.

Exploration

Inco Metals spent \$22 million on exploration for primary metals in 1977, compared with \$23 million in 1976. The decrease was attributable to a curtailment of field exploration activities.

More than 65 per cent of the 1977 expenditures were made in Canada, principally in the vicinity of Inco's producing mines, where exploration was carried out on a scale similar to 1976. In the Sudbury area, deep drilling from surface to test unexplored geological targets down to a depth of 10,000 feet continued to be the major program.

Elsewhere in Canada, field exploration was carried out in British Columbia, New Brunswick, Ontario, Quebec and the Yukon Territory. Outside of Canada, exploration for nickel, copper and other minerals continued in Australia, Brazil, Mexico and the United States. During the year, a small exploration program was undertaken in the Republic of Ireland.

An access tunnel to the mineralized zone of Inco's Tiebaghi chromite property in New Caledonia was completed in 1977. At

year-end, underground drilling had begun to define extensions of ore shoots beneath the dormant mine. The drill program to help determine the economic feasibility of reactivating this chromite mine will be completed in 1978. This is a joint exploration and evaluation venture in which Inco has a 55 per cent share and French partners the remainder.

In June 1977, the Company signed a mining convention with the French government, establishing the terms and conditions under which Inco, with partners of its choice, could propose a nickel production facility in the southern part of New Caledonia. A work program to determine the feasibility of such a project is to be completed within five years. The Company has acquired the necessary mining titles to properties on which it has held options for several years, and studies to investigate low energy-consuming processes for extracting nickel from the laterites are in progress at the J. Roy Gordon Research Laboratory near Toronto.

A reappraisal of the economic feasibility of producing nickel from the Barro Alto lateritic deposit in Brazil led Inco and its partners to conclude in 1977 that the project is not economic under present conditions. The project data will be reviewed from time to time.

Other inactive projects include the Widgiemooltha sulphide nickel and the Rockhampton lateritic nickel deposits in Australia, the copper-nickel sulphide deposit in Minnesota, and the copper deposits on the Keweenaw Peninsula in Michigan.

Ore Reserves

At December 31, 1977, Inco had proven ore reserves in Canada of 407 million short tons, containing 6.9 million short tons of nickel and 4.3 million short tons of copper. This compares with reserves at year-end 1976 of 412 million short tons containing 6.8 million tons of nickel and 4.4 million tons of copper.

Proven reserves are only those that have been sampled in sufficient detail to enable a reliable calculation of tons of ore and tons of contained metal.

The Company has also outlined very large resources of nickeliferous laterite at Soroako, on the island of Sulawesi in Indonesia, and in the Lake Izabal area in eastern Guatemala. At each location, these resources are adequate to support operations at design

capacity for the expected lives of the facilities.

Industrial Relations

In the United Kingdom, agreements were negotiated in 1977 with unions representing hourly paid and staff employees at the Clydach nickel refinery.

In the Manitoba Division, a cooperative wage study program for hourly paid employees was implemented on December 1, 1977 in accordance with a negotiated agreement with the United Steelworkers of America.

Negotiations for the renewal of the collective agreements for hourly paid employees in the Sudbury and Port Colborne areas will begin with the United Steelworkers of America in the spring of 1978. The present agreements will terminate July 10, 1978.

Employees

At the end of 1977, Inco Metals had a total of 28,665 employees. Of the total, 21,720 were employed in Canada; 3,481 in Indonesia; 1,614 in the United Kingdom; 1,377 in Guatemala, including 276 involved in construction; 321 in the United States; and 152 elsewhere.



Chairman and Chief Executive Officer
Inco Metals Company



John McCreedy

Net sales of the Formed Metal Products Group in 1977 were \$377 million, up 3 per cent over 1976. Rolling mill deliveries during the year totalled 88 million pounds, compared with 91 million pounds in 1976. The value of new orders received in 1977 was 35 per cent greater than in 1976. If this pattern continues, improved sales may be expected in 1978.

The Formed Metal Products Group manufactures and markets worldwide many different types of forgings and high-nickel alloys in the form of sheet, strip, tubing, bar and welding products. These products become components of equipment in such markets as the chemical, aerospace, energy-conversion and marine industries.

The Formed Metal Products Group, which purchases Inco nickel at prevailing market prices, is the largest single consumer of the Company's primary nickel products. As such, it contributes to the Company's over-all profitability in two ways: by operating profitably in itself and by marketing products containing Inco nickel. The formed metal products delivered to customers in 1977 contained 55 million pounds of nickel.

Huntington Alloys, Inc.

Sales of \$221 million represented a decline of 5 per cent from the 1976 level, reflecting stagnation of business activity in the capital goods sector, particularly the process industries where expenditures for additional capacity have lagged behind those in previous economic recoveries in the United States.

Huntington Alloys' new orders in 1977, buoyed by a strong fourth quarter, were 26 per cent ahead of 1976.

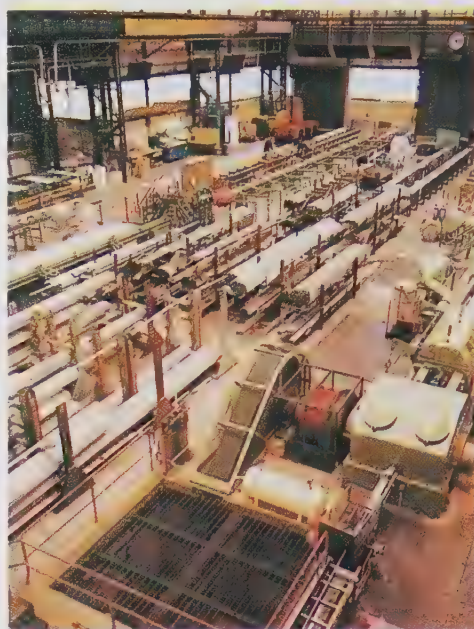
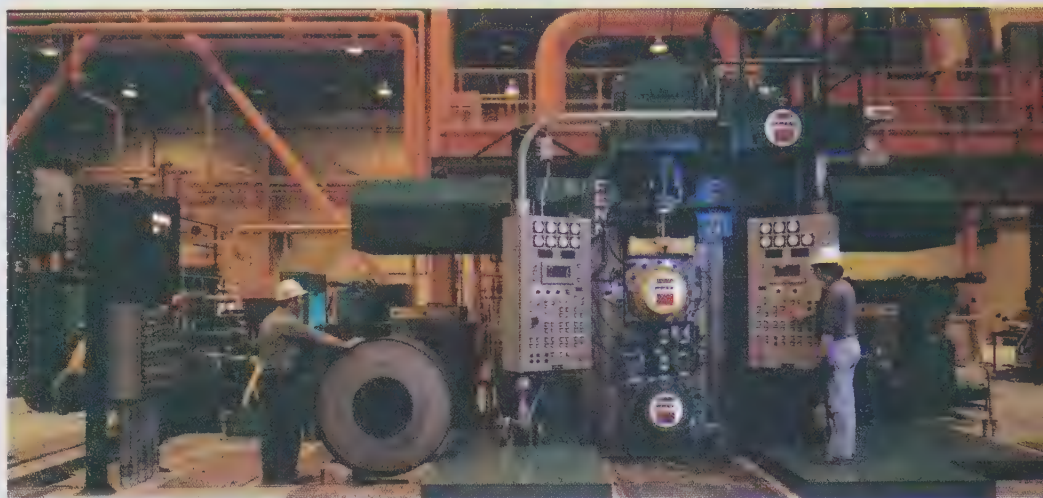
During 1977, Huntington Alloys concentrated on improved profitability and cash conservation through increased productivity, inventory control and energy management.

Henry Wiggin & Company Limited

Sales increased 30 per cent in 1977 to \$92 million in comparison with the very low level of 1976, aided in the latter part of the year by the strengthening of the pound sterling.

New orders in 1977 were 50 per cent greater than during 1976.

Wiggin's high-nickel alloys are sold principally in Europe to chemical, petrochemical, gas turbine, electrical and electronics manufacturers. The continuing relative depression of the market has



generated extremely strong competition, which has required pricing flexibility on Wiggin's part to retain a satisfactory share of available business.

Sales of alloys for gas turbines were down in 1977 because the aircraft engine business remained slack, pending decisions by airlines on reequipping their fleets. Improved sales to other markets, such as automotive, industrial gas turbine, electronics and chemical processing, have more than compensated for the weak aircraft market.

Wiggin's ability to respond to the varied requirements of the processing industries will be enhanced in 1978 when a modernized and expanded tube mill is fully operative. Work is also progressing according to schedule on new vacuum-melting facilities that will enable Wiggin to remain competitive in the turbine

Top: The cold-rolling mill at the new Canadian Alloys Division in the Sudbury District is undergoing pre-production runs. The mill will produce nickel and cupro-nickel strip for coinage and other applications.

Left: A major extension to tube-drawing facilities at Henry Wiggin supports the company's drive for nickel alloy business in the European chemical and petrochemical industries.

Right: Samples of hollow forgings produced by Daniel Doncaster for use in heavy-duty axle and transmission parts.

Officer

Harold F. Hendershot
Vice-President
Inco Limited

Principal Operations

Robert W. Simmons
President
Huntington Alloys, Inc.
Huntington, W. Va.
Derek O. Herbert
Managing Director
Henry Wiggin & Company Limited
Hereford, England

Richard T. Doncaster
Chairman
Daniel Doncaster & Sons Limited
Sheffield, England

C. Bruce Goodrich
General Manager
Canadian Alloys Division
Lively, Ontario

Saburo Minato
President
Daido Special Alloys Ltd.
Tokyo, Japan

Principal properties, plants, laboratories and products

Rolling mills
Huntington, West Virginia, and Burnaugh, Kentucky,
U.S.A.
Hereford, England
Lively (Sudbury), Ontario
Products: Wrought nickel, high-nickel alloys, nickel and
cupro-nickel coinage strip

Forging plants
Sheffield, Hull, Dudley, Leeds and Oldham, England
Blaenavon, Wales
Products: Forged and machined products of nickel and
high-nickel alloys; stainless, carbon and alloy steels;
titanium

Research laboratories
Huntington, West Virginia, U.S.A.
Hereford and Sheffield, England

industry and also to increase sales to the electronics industry.

Daniel Doncaster & Sons Limited

Net sales of \$64 million represented an increase of 4 per cent in 1977. New orders were 56 per cent greater than in 1976. This turnaround, which began during the second half of 1977, is being led by demand for Doncaster's products by gas turbine manufacturers.

Doncaster, which will celebrate its bicentennial in 1978, produces high-stress products, principally for the aircraft industry in the United Kingdom. It is a world leader in the production of precision forgings for special applications, such as parts for aircraft engines, industrial gas turbines, automotive engine valves and forgings for surgical prostheses. Among its intricate products are hollow-axle forgings for heavy-duty commercial vehicles, wellhead blow-out prevention valves and shaped rings. In addition, Doncaster produces an extensive range of conventional open and closed die forgings used in the manufacture of machinery and piping systems.

Although Doncaster historically has been most active in the United Kingdom, it is increasing its sales activities throughout the world.

Doncaster is currently installing flash butt-welding equipment to supplement its forged and rolled ring production, and an additional extrusion press to increase its capacity to produce large hollow-axle forgings.

Canadian Alloys Division

The Canadian Alloys Division's new rolling mill near Sudbury was completed in the fourth quarter of 1977 and trial production has begun. The mill, which is based on new technology, is expected to improve Inco's competitive position in the nickel and cupro-nickel alloy strip business, particularly in the coinage field. The strip is formed by the direct rolling of metal powders produced at the mill.

Hiring and training of the workforce have begun and the mill will be capable of commercial production in the first quarter of 1978. The investment in this facility, including working capital, is expected to be about \$25 million.

Daido Special Alloys Ltd.

Daido Special Alloys Ltd. is a Japanese joint venture in which Inco and Daido Steel Co., Ltd., Nagoya, Japan, have equal interests. The venture's level of business did not improve in 1977, having been restrained by relatively poor business conditions in Japan. However, recent orders by Japanese fabricators for large projects outside Japan should result in increased sales in the future.

In November 1977, the partners signed new agreements, involving the production of nickel and other metal alloys on a toll basis by Daido Steel for Daido Special Alloys. It is anticipated that this will provide customers with a wider variety of products and improved services.

Daido sells specialty and high-nickel alloys in Japan.

Environmental Control

The Formed Metal Products Group is substantially in compliance with current regulations governing its effluents at all its plants.

Huntington Alloys, Inc. completed the installation of a \$1.4-million waste-water treatment facility at its Burnaugh, Kentucky, plant to meet federal limitations on aqueous

effluents. Early in 1977, a \$600,000 baghouse was installed at the same location and is successfully controlling fume and dust from the melting furnaces.

At its Huntington facility, Huntington Alloys completed installation of a \$1-million plant for pretreating 450,000 gallons a day of rinse water from the pickling operation. The plant is now in the start-up phase.

Industrial Relations

A three-year collective agreement, to December 19, 1980, was negotiated at Huntington Alloys, Inc., covering 1,510 production and maintenance employees at the Huntington plant.

Huntington Alloys, Inc. and the United Steelworkers local representing its 280 production and maintenance employees at the Burnaugh, Kentucky, plant failed to reach agreement on a new contract and a strike began on January 13, 1978 upon the expiration of the collective bargaining agreement.

In the United Kingdom, agreements were negotiated during 1977 for a one-year term with unions representing employees at Henry Wiggin & Company Limited in Hereford.

Employees

At year-end 1977, the Formed Metal Products Group had 8,633 employees, compared with 8,857 on December 31, 1976. Of the total, 5,696 were employed in the United Kingdom, 2,888 in the United States and 49 elsewhere.

Harold F. Hendershot

Vice-President
Inco Limited



Harold F. Hendershot

A reorganization of ESB Incorporated, effective January 1, 1978, created a holding-company structure. The parent company was renamed ESB Ray-O-Vac Corporation. The well-known battery trademark RAY-O-VAC* was included in the new corporate name to foster broader recognition of the company and its business, while giving still wider prominence to the brand name of the company's line of dry-cell batteries.

World economic conditions during 1977 had both strong and soft elements affecting battery markets. While sales of primary batteries experienced some slowness due to tight purchasing practices during 1977, orders surged near year-end as heavy sales

at retail depleted inventories. Generally, the year was a good one for automotive batteries, but margins were somewhat depressed because of higher lead prices. Industrial battery activity was moderate, being tied more closely to capital goods spending. Margins were affected by lead prices and other cost increases which could not be fully recovered due to price competition.

Sales by ESB Ray-O-Vac were \$706 million in 1977, compared with \$598 million in 1976. Of this 18 per cent increase in sales, approximately one-third was attributable to the inclusion of sales of AB Tudor of Sweden, a company acquired in January 1977, the remainder coming principally from higher prices.

Officers

Frederick J. Port
Chairman and President

Executive Vice-Presidents
Benno A. Bernt
Raymond A. Hoddy
Robert Kent
Richard T. Nalle, Jr.

Comptroller
Thomas P. Callahan

Secretary and Chief Counsel
Robert I. Staples

Treasurer
John P. Guimond

Principal properties, plants, laboratories and products

Corporate headquarters
5 Penn Center Plaza, Philadelphia, Pennsylvania 19103, U.S.A.

92 plants in 22 countries

Batteries and related electrical and electronic products:
29 plants in the U.S.; 7 in Canada; 5 in Brazil; 3 each in Japan and Mexico; 2 each in Colombia, Denmark, South Africa, Sweden, Venezuela and Iran; one each in the following countries: Austria, Dominican Republic, Greece, Guatemala, India, Korea, Morocco, Nicaragua, Peru, United Kingdom, Zaire

Plastics and others:

4 plants in the U.S.; one in the United Kingdom

Safety and health products:

8 plants in the U.S.; one in Canada; one in Mexico

Electric motors:

4 plants in the U.S.; two in the United Kingdom; one in India

Technology Center:

Yardley, Pennsylvania



The ESB Ray-O-Vac exhibit at the International Electric Vehicle Expo, held in Chicago during April, featured the Sundancer, the company's test vehicle.

* ESB Ray-O-Vac trademark



Top: During the year, ESB Exide Power Systems Division commenced production at this new industrial battery plant in Richmond, Kentucky.

Bottom: To keep pace with growing demand, Ray-O-Vac's new Portage, Wisconsin, plant, designed for 350,000 button-cells a day, began production of these batteries for watches and hearing aids.

A majority of ESB Ray-O-Vac's business units achieved earnings increases. Earnings before taxes, however, were substantially below the record levels of 1976. The most significant negative factor was a large provision for the nonrecurring costs of closing the Philadelphia industrial battery plant. Other significant adverse factors were substantial increases in the costs of materials, labor and other items, which in some business units could not be fully or immediately offset by increased selling prices, and lower than expected sales.

ESB Ray-O-Vac's automotive battery products accounted for 37 per cent of sales in 1977; dry-cell batteries and portable lighting devices, 31 per cent; industrial and specialty batteries, 15 per cent; and personal safety products, fractional horsepower motors and other products, 17 per cent.

In a move to concentrate efforts and resources on its principal businesses, ESB Ray-O-Vac sold profitably two small U.S. divisions, Mayfair Molded Products and Atlas Minerals & Chemicals.

Batteries and Related Products

Dry Cells

Operations at the Ray-O-Vac Division's new Portage, Wisconsin, plant began early in 1977. The plant produces miniature batteries for digital watch and hearing-aid applications, a steadily growing market. Through the new plant, Ray-O-Vac has doubled its miniature battery capacity to more than 350,000 cells a day.

Another expanding market is batteries for instant photography. Ray-O-Vac's sales of battery components for Polaroid SX 70 thin-film packs have increased severalfold over the past two years.

One of the major lighting products introduced by Ray-O-Vac in 1977 was a new floatable flashlight, which will rise to the surface without damage should it be dropped overboard. The F2 flashlight is constructed of high-impact plastic and corrosion-resistant materials.

A newly designed penlight is another new lighting device introduced by Ray-O-Vac during the year. It is a disposable flashlight with long-lasting power and a bright, pinpoint light.

In 1977, ESB Ray-O-Vac entered into a joint venture with a 55 per cent interest in a button-cell battery operation in Gumi, Korea. The 42,000-square-foot plant is scheduled to begin operations at the end of February 1978. It will produce a line of button-cells to service the rapidly expanding watch-battery market.

The Korean button-cell plant is part of an industrial park that also includes a standard dry-cell plant for which ESB Ray-O-Vac is providing technology. The company has an option to acquire a 34 per cent interest in the plant.

Automotive

The Automotive Division set a sales record in 1977.

The Division's new hybrid-construction battery, with different grid alloys for positive and negative plates, was rated higher in cold-cranking performance than any U.S. competitor in 1977 by an independent testing agency. The first application of hybrid construction is in batteries produced for Montgomery Ward.

To keep up with growing demand for replacement batteries for motorcycles, the Automotive Division has expanded its SURE-START® line from five to 10 types, giving the company the capacity to meet the battery requirements of 80 per cent of the U.S. motorcycle market. The expansion involved new "master-pack" batteries, which have electrolyte included, permitting direct sales to consumers.

Industrial

September 1977 marked the official opening of the Exide Power Systems Division's

® ESB Ray-O-Vac trademark

Richmond, Kentucky, plant. The 202,000-square-foot industrial battery plant began limited production earlier in the year.

In late summer, the Division moved its headquarters from Philadelphia to the nearby suburb of Horsham.

During September, Exide Power Systems announced its decision to close its industrial battery plant in Philadelphia in the first quarter of 1978 and to increase the storage battery capacity of its Richmond and Sumter, South Carolina, plants. The closing, which will affect 350 employees, was made necessary by low productivity, high labor costs and the prohibitive cost of renovating the factory.

Safety Products

The separate marketing activities of the Granet, Miller and Willson Divisions were combined in 1977 to form a single Occupational Safety Marketing Division. This unified approach enables the distribution channel to offer a broader line of safety products to the market. Headquarters for the new marketing division are located in Reading, Pennsylvania.

The Willson Division introduced a U.S. government-approved multi-purpose respirator designed to provide protection against hazards generated by spray painting and pesticide applications.

The Exide Safety Systems Division developed and brought to the market late in the year a combination smoke detector-emergency lighting system called TAKE CHARGE*. The emergency light goes on automatically when either the alarm sounds or a power failure occurs. TAKE CHARGE is the first smoke-detector alarm that uses household current to keep its rechargeable batteries continuously charged for up to five years.

Electric Motors

Increased housing starts and an export market rise during the year helped gain record levels of sales for the company's Universal Electric subsidiary. A recently introduced high-efficiency fractional-horsepower electric motor had a major role in enabling the company to achieve these records and to enlarge its share of the market for motors in ventilating, air conditioning and heating products.





Top left: Automotive batteries made at the Allentown, Pennsylvania, plant are shown being moved from final assembly to the warehouse.

Above: Motive power batteries, similar to those on this finishing line, for forklift trucks, mine locomotives and other mine vehicles, make up the largest segment of sales in the Exide Power Systems Division.

Bottom left: The ESB Technology Center developed the LITHICRON[®] heart pacer programmer, which regulates and monitors pacer performance without removal from the patient's body.

Technology

A new vibrating-anode storage battery prototype, the VIBROCEL[†] battery, with nickel and zinc electrodes, is under development by AB Tudor and at ESB Ray-O-Vac's Technology Center, Yardley, Pennsylvania. This battery provides more energy for the same weight than the current lead-acid batteries and if successful may be used in powering electric vehicles.

A high-frequency battery charger was developed in 1977. Used for industrial applications such as forklift truck batteries, the new chargers are markedly smaller in size and weight and can be used as portable units. By converting to high frequencies and drastically reducing the use of iron, the weight of a charger has been reduced from over 200 pounds to 10 pounds. Electric vehicle applications could prove to be an important market for the high-frequency charger.

Soon to be marketed by ESB Medcor, Inc. is a newly designed heart pacer-programmer that enables a doctor to adjust an implanted pacer's performance characteristics without removing it from the body. The LITHICRON[®] F is the only pacer-programmer with instantaneous readback to the doctor. It was introduced at the American Heart Association convention in December 1977.

Environmental Control

The pollution control system for recycling waste water, installed at the Exide Power Systems' new Kentucky battery plant, was developed at Yardley. The development, which makes possible the recycling of 80 per cent of plant process water while cleansing the portion going into the sewage system to better than acceptable levels, establishes ESB Ray-O-Vac as the first in the battery industry to treat effluents on such a scale. Plans call for installation of the system at the South Carolina plant in April 1978.

Safety and Health

While the company is convinced that its present programs are more than adequate to guarantee employees' health, it is increasingly apparent that the U.S. government plans to set more stringent standards for employees working with lead. Some of the early proposals made by the Department of Labor could be very costly to the company, but the details will not be known until the final standards are issued.

The U.S. Environmental Protection Agency is considering establishing a federally allowable level of lead in air surrounding plants where lead is produced or used. If adopted, this level would require substantial expenditures for emission-control equipment at several of the company's plants.

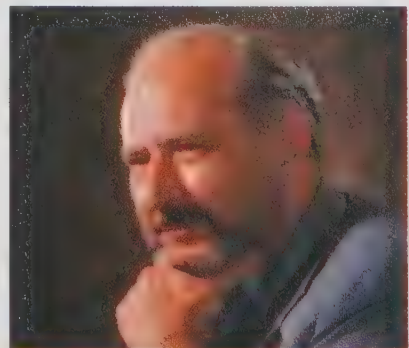
Industrial Relations

Twenty-two labor contracts with unions representing production units were concluded by ESB Ray-O-Vac during the year. One work stoppage was experienced. It involved 350 employees at the Ray-O-Vac Division's Clinton, Massachusetts, lighting devices plant from April 1 through July 1977.

Employees

At year-end, ESB Ray-O-Vac had 18,706 employees, compared with 17,071 on December 31, 1976. Of these, 12,322 were employed in the United States, 915 in Canada and 5,469 in 20 other countries.

Chairman and President
ESB Ray-O-Vac Corporation



Frederick J. Port



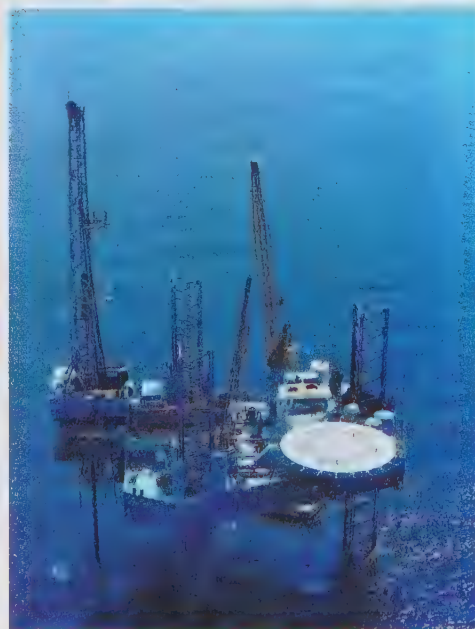
Top left: Test pouring at Inco's research stations of a nickel-chromium-iron remelt alloy recovered from stainless steel mill waste. Inmetco, an Inco subsidiary, is bringing into production this unique reclamation process.

Top right: Inco developed, and markets through MPD Technology, a variety of metal hydrides that act as sponges for hydrogen, making possible the storage of large volumes of gas in compact, light containers.

Centre left: Tires are both manufactured and retreaded at the Ontario plants of United Tire & Rubber Co. Ltd. Inco has a minority position in this Canadian company.

Centre right: Automobile wheel cover and other products made of CAPREZ directly electroplateable plastic, an Inco-developed material.

Bottom: Inco subsidiaries, in association with partners, are exploring for oil and gas off the coasts of Guatemala and Belize.



Diversification

No new major diversification moves were made in 1977, but progress was made by means of internal developments, venture capital investments and a small acquisition.

Construction of a metals recycling plant by The International Metals Reclamation Company, Inc. (Inmetco) was begun near the end of 1977. Inmetco is a wholly owned subsidiary formed in 1976 to put into commercial operation an Inco-developed process for producing steelmaking charge materials rich in chromium, nickel and iron from specialty steel mill waste. The Ellwood City, Pennsylvania, plant will have the capability to process 40,000 tons of material a year. The reclamation facility, which is scheduled for completion late in 1978, will represent an investment of about \$30 million.

Pittsburgh Pacific Processing Co. (PPP), whose business is related to Inmetco's, was purchased by Inmetco in May 1977. PPP processes specialty steel grindings into quality briquettes for use as a steelmaking charge material, and is an international consultant on both process and engineering for agglomeration plants. PPP has a profitable history and offers attractive growth prospects.

CAPREZ[®] directly electroplateable plastic, an Inco development, was used in 1977 for the first time in consumer products and for trial production of automotive parts. Several new specialty engineering polymer products have been developed by Inco. These will broaden the markets served by MPD Technology Corporation, which directs the Company's plastics business.

Inco has become a leader in the technology of metal hydrides. These are solid substances capable of storing hydrogen and releasing it safely on demand. Inco's HY-STOR[®] metal hydride products, many of which are proprietary, are now being commercially produced and sold in small quantities.

The Company's venture capital investment portfolio was profitable in 1977. Inco disposed of its minority equity investments in two small companies, one in 1977 and the other early in 1978, at a profit of over \$1 million—a 100 per cent return on investment in slightly over a year. The Company also realized income from various fees and dividends.

Over the past two-and-a-half years, Inco's portfolio has grown to about \$7 million, representing minority positions in 20

[®]Inco trademark

Research and development laboratories

*Sterling Forest, New York, U.S.A.
Wrightsville Beach, North Carolina, U.S.A.
Birmingham, England*

Venture operations

Ellwood City and Pittsburgh, Pennsylvania, U.S.A.

businesses. These investments have been made, principally in high-technology companies, in the United States, Canada and Europe. They include Oximetrix in medical equipment; Paradyne in computer peripherals; and United Tire & Rubber Co. Ltd. in off-road tires. One new company in Inco's venture capital portfolio is Genentech, a U.S. firm in which the Company has acquired a 15 per cent interest. A pioneer in biological sciences, Genentech is the first firm to synthesize and manufacture a human hormone, somatostatin. It is hoped that this development will permit the synthesis and manufacture of insulin in the near future.

The Inco-sponsored program in Canada to identify, train and provide financing to entrepreneurs held two workshops in 1977, attended by 50 entrepreneurs. A number of businesses are being evaluated for possible investment.

Resource Development

The consortium consisting of Inco and United States, German and Japanese partners continued its study in 1977 of the feasibility of mining and processing deep-ocean nodules.

An oil-drilling ship, SEDCO 445, was converted to a pilot mining ship, and equipment was installed to recover nodules from a sea depth of three miles. The equipment, which includes nodule collectors, pipeline, pumps, pipehandling gear and instruments to control and monitor performance, will be tested at sea during the first half of 1978.

The legal and fiscal regime under which a nodule-mining industry would operate has not yet been defined. These unresolved aspects of deepsea mining, along with technical, marketing and economic problems, must be taken into account in deciding when a commercial operation might be feasible.

The Company and its partners continued oil and gas exploration activities in Guatemala and Belize.

Compañía Centram, S.A., a majority-owned Inco subsidiary with petroleum exploration rights in Guatemala, evaluated the results obtained from new

seismic surveys conducted in 1977 and the offshore wells drilled in 1975 and 1976 and decided that additional seismic work is justified. Depending upon the outcome of this work, further drilling could be undertaken. An agreement has been reached with Atlantic Richfield Company (Arco) to participate in this program on certain of the rights. Inco's interest in the petroleum exploration rights in Guatemala is 87.5 per cent. Arco can earn a half interest in certain rights by drilling.

A wholly owned subsidiary of the Exxon Corporation drilled a dry hole to a depth of 10,320 feet within Inco's concession in Belize. This work earned the Exxon subsidiary a 57 per cent interest; a majority-owned Inco subsidiary has a 19 per cent interest. Additional seismic work is planned in 1978.

As a result of increased participation by partners, Inco's share of the expenditures was sharply reduced in 1977 from the \$11 million in 1976.

Inco's participation in the Panarctic Oils Ltd. venture in the Canadian Arctic continued at 5 per cent.

Research and Development

Inco's product research and development was restructured, effective January 1, 1978. The Paul D. Merica Research Laboratory, Sterling Forest, New York, has been designated the Inco Research and Development Center (IRDC). Associate laboratories in the corporate research complex are the European Research and Development Centre, Birmingham, England, and the Francis L. LaQue Corrosion Laboratory, Wrightsville Beach, North Carolina.

In 1977, several noteworthy new products were developed:

A mechanically alloyed, high-strength nickel-base superalloy for advanced gas turbine blades, capable of operating at a temperature 150° C higher than commercially available blade alloys, and thus permitting fuel economy.

A blackened nickel foil that permits efficient capture of heat from solar energy.

Improved metal hydride alloys for the storage of hydrogen.

In the course of 1977, three laboratory accomplishments of previous years moved from the developmental to the commercial stage:

Nickel-plated aluminum bumpers were

introduced by a German automobile manufacturer; they will be used on North American cars for the first time in 1978. Corrosion performance data developed by Inco laboratories played an important role in demonstrating the advantages of nickel plating aluminum bumpers.

A derivative of the Company's IN-748, an improved stainless steel, gained wide acceptance as a cost-effective alternative to titanium in salt water condensers.

IN-862, an improved cast stainless steel, was specified for major components in irrigation pumps for the Middle East.

Restructuring

Inco Metals Company was established on April 1, 1977 as a unit of Inco Limited to operate the Company's primary metals business. Inco Metals is responsible for the production and marketing of primary metal products on a worldwide basis and for related technical and administrative functions.

With the formation of Inco Metals, Inco Limited's business is now organized around three principal product groups: primary metal products, formed metal products, and batteries and related products.

John McCreedy, a former Senior Vice-President of Inco Limited, was elected Chairman and Chief Executive Officer of Inco Metals. He continues to be a member of the Board of Directors of Inco Limited. Donald J. Phillips, former Chairman and Chief Officer of Inco Europe Limited, was elected President and Chief Operating Officer of Inco Metals. Two former Vice-Presidents of Inco Limited, Walter Curlook and Charles E. O'Neill, were elected Senior Vice-Presidents of Inco Metals. Johannes P. Schade, formerly Regional Marketing Manager of Inco Europe Limited, was also elected a Senior Vice-President.

Inco Limited's principal executive offices were moved from the Toronto-Dominion Centre to 1 First Canadian Place, Toronto, on May 1, 1977 to consolidate Company headquarters offices and the offices of Inco Metals Company at one location.

Directors and Officers

L. Edward Grubb retired as Chairman and Chief Officer of Inco Limited and as a member of the Board of Directors and Chairman of the Executive Committee on April 20, 1977, upon reaching the

Company's normal retirement age. Mr. Grubb had been Chief Officer of the Company since 1972 and a Director since 1971. He served Inco in various industrial relations, sales, production and senior management positions in Canada, the United Kingdom and the United States over a period of 43 years.

At the Annual Meeting on April 20, 1977, the Company's shareholders approved a bylaw decreasing the number of Directors from 22 to 21.

J. Edwin Carter, who had been President of the Company since February 1974, was elected Chairman and Chief Executive Officer on April 20, 1977. He has been a Director since February 1973. Mr. Carter joined Inco as a metallurgist at Huntington Alloys, Inc. in 1937 and was President of Huntington Alloys in 1971 when he was elected a Vice-President of Inco Limited. He served as Executive Vice-President of the Company from 1972 until 1974.

Charles F. Baird, who had been Vice-Chairman of the Company since January 1976, was elected President on April 20, 1977. He has been a Director since January 1974. Mr. Baird joined Inco in 1969 as Vice-President—Finance. He was a Senior Vice-President from 1972 until 1976.

Kenneth A. DeLonge retired as a Senior Vice-President and as a member of the Board of Directors on November 11, 1977, upon reaching normal retirement, after more than 40 years of service with the Company.

Ian McDougall, Senior Vice-President of Inco Limited with corporate responsibility for finance, was elected a member of the Board of Directors on December 5, 1977.

James H. Goss, who had been a Director since September 1960, retired from the Board on February 6, 1978, upon reaching

normal retirement age for Directors who are not officers.

Harold Bridges, who was President and Chief Executive Officer of Shell Oil Company, Houston, Texas, from July 1971 until his retirement in April 1976, was elected a member of the Board of Directors, effective February 7, 1978.

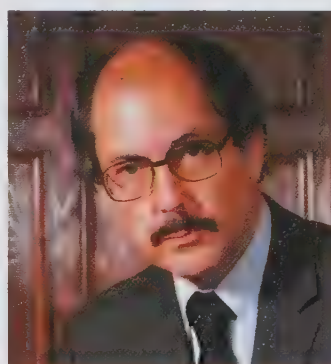
Employees

On December 31, 1977, Inco Limited had a total of 56,922 employees, compared with 55,767 at year-end 1976. The increase is primarily attributable to ESB Ray-O-Vac's acquisition of AB Tudor. The number of employees in each of the Company's three major product groups is reported in the respective sections of this Report.

Significant reductions in the number of employees will occur in 1978 as a result of actions already announced.

Shareholders

At year-end, the Company had 77,875 Common shareholders of record and 924 Preferred shareholders of record, compared with 78,014 Common shareholders of record on December 31, 1976. According to the Company's record of shareholders, 65 per cent had addresses in Canada, 33 per cent in the United States and 2 per cent elsewhere. Of the shares having general voting rights, i.e., the Common Shares and the Series B Preferred Shares, Canadian residents of record held 53 per cent, United States residents of record 33 per cent, and residents of record in other countries 14 per cent.



The Company's Senior Vice-Presidents, from left: Ian McDougall, William Steven, Ashby McC. Sutherland

Consolidated Statement of Earnings (in thousands)

Year ended December 31	1977	1976
Revenues		
Net sales	\$1,953,328	\$2,040,282
Other income	35,131	34,310
	1,988,459	2,074,592
Costs and expenses		
Costs	1,399,735	1,324,608
Selling, general and administrative expenses	188,944	171,890
Depreciation and depletion	116,619	113,271
Interest, net of amounts capitalized	66,251	66,376
Pension expense	59,153	53,269
Currency translation adjustments	(17,596)	(2,001)
	1,813,106	1,727,413
Earnings before income and mining taxes	175,353	347,179
Income and mining taxes	75,494	150,421
Net earnings	\$ 99,859	\$ 196,758
Net earnings per common share	\$1.24	\$2.64

Consolidated Statement of Retained Earnings (in thousands)

Year ended December 31	1977	1976
Retained earnings at beginning of year	\$1,404,442	\$1,327,007
Net earnings	99,859	196,758
Preferred dividends	(7,535)	—
Common dividends, \$1.25 per share (1976-\$1.60 per share)	(93,241)	(119,323)
Retained earnings at end of year	\$1,403,525	\$1,404,442

The Explanatory Financial Section on pages 24 through 29 is an integral part of these statements.

Auditors' Report

To the Shareholders of Inco Limited:

We have examined the financial statements and explanatory financial section appearing on pages 21 through 29 of this report. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of Inco Limited and subsidiaries at December 31, 1977 and 1976 and the results of their operations and changes in financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Toronto, Ontario
New York, New York
February 16, 1978

PRICE WATERHOUSE & CO.

Consolidated Balance Sheet (in thousands)

December 31	1977	1976
Current assets		
Cash	\$ 22,756	\$ 26,574
Marketable securities	20,269	46,299
Accounts receivable	381,657	432,941
Inventories	1,080,715	879,774
Prepaid expenses	12,697	10,268
Total current assets	1,518,094	1,395,856
Property, plant and equipment	3,501,665	3,086,719
Less—Accumulated depreciation and depletion	1,064,924	967,304
	2,436,741	2,119,415
Other assets		
Investments in and advances to affiliates, on an equity basis	51,376	47,147
Miscellaneous securities	21,984	19,302
Charges to future operations	11,678	7,601
Unamortized cost in excess of net assets of business acquired	35,891	38,990
	120,929	113,040
Total assets	\$4,075,764	\$3,628,311
Current liabilities		
Notes payable	\$ 211,020	\$ 380,580
Accounts payable and accrued expenses	328,047	306,980
Long-term debt due within one year	84,850	21,418
Income and mining taxes payable	67,961	91,572
Total current liabilities	691,878	800,550
Other liabilities		
Long-term debt	1,019,688	849,569
Deferred income and mining taxes	387,200	368,800
Pension benefits	41,593	28,500
Minority interest	20,576	18,527
	1,469,057	1,265,396
Shareholders' equity		
Preferred shares issued, \$25 (Cdn.) par value:		
Series A floating rate—10,000,000 shares	239,250	—
Series B 7.85%—5,000,000 shares	114,000	—
Common shares without nominal or par value, issued 74,593,655 shares; 1976—74,587,485 shares	97,018	96,887
Capital surplus	61,036	61,036
Retained earnings	1,403,525	1,404,442
	1,914,829	1,562,365
Total liabilities and shareholders' equity	\$4,075,764	\$3,628,311

The Explanatory Financial Section on pages 24 through 29 is an integral part of these statements.

Approved by the Board of Directors:

J. Edwin Carter

Charles F. Baird

Consolidated Statement of Changes in Financial Position (in thousands)

Year ended December 31	1977	1976
Financial resources were provided by		
Net earnings	\$ 99,859	\$196,758
Income charges (credits) not affecting working capital		
Depreciation	93,388	90,998
Depletion	23,231	22,273
Deferred income and mining taxes	16,600	26,500
Equity in earnings of affiliated companies	(1,574)	(7,226)
Loss on disposals of property, plant and equipment	6,177	2,141
Amortization of cost in excess of net assets of business acquired	3,099	3,099
Currency translation adjustments not affecting working capital	(12,995)	(5,299)
Other – net	5,285	1,320
Working capital provided by operations	233,070	330,564
Long-term borrowings	270,746	268,128
Net proceeds from sales of preferred shares	349,311	—
Other – net	18,481	7,230
Total	871,608	605,922
Financial resources were used for		
Preferred dividends	7,535	—
Common dividends	93,241	119,323
Capital expenditures	432,837	459,056
Reduction of long-term debt	107,085	21,690
Total	640,698	600,069
Increase in working capital	\$230,910	\$ 5,853

Analysis of changes in working capital

Increase (decrease) in current assets		
Cash and marketable securities	\$ (29,848)	\$ (32,046)
Accounts receivable	(51,284)	142,002
Inventories	200,941	153,699
Prepaid expenses	2,429	1,825
Total	122,238	265,480
Increase (decrease) in current liabilities		
Notes payable and other debt	(106,128)	209,958
Accounts payable and accrued expenses	21,067	41,178
Income and mining taxes payable	(23,611)	8,491
Total	(108,672)	259,627
Increase in working capital	\$230,910	\$ 5,853

The Explanatory Financial Section on pages 24 through 29 is an integral part of these statements.

Explanatory Financial Section

Note 1. Summary of Significant Accounting Policies

This summary of the major accounting policies of Inco Limited and subsidiaries is presented to assist the reader in evaluating the financial statements contained in this Report. These policies have been followed consistently in all material respects for the periods covered in the financial statements.

Principles of consolidation—The financial statements consolidate the accounts of the Company and its subsidiaries and are prepared in conformity with generally accepted accounting principles as established in Canada which, in the Company's case, conform with those established in the United States.

Translation of financial statements into United States dollars—The financial statements are expressed in United States currency. Cash, accounts receivable, current liabilities, the liability for pension benefits and long-term debt are translated at year-end rates of exchange. The translation of all other assets and liabilities generally recognizes the rates historically applicable. Revenues, expenses and certain costs are translated at monthly average rates during each year; inventoried costs, depreciation and depletion are translated at historical rates. Realized exchange gains and losses and currency translation adjustments are included in earnings currently.

Inventories—Inventories are stated at the lower of cost or net realizable value. Cost for certain metals inventories in the United States is determined by the last-in, first-out method. Cost for other metals is average production or purchase cost, and for supplies is average purchase cost. Cost for batteries and related products is determined principally on a first-in, first-out basis.

Property, plant and equipment—Substantially all property, plant and equipment is stated at cost. Such cost in the case of the Company's mines—virtually all of which were discovered and developed by the Company—represents, with relatively minor exceptions, only that part of related development and acquisition costs which was capitalized. All expenditures relating to the Indonesian and Guatemalan projects, presently under development, are capitalized.

Depreciation and depletion—Depreciation is calculated using the straight-line method based on the estimated economic lives of property, plant and equipment. Such lives are generally limited to a maximum of 20 years and are subject to periodic review. Depletion is calculated by a method which allocates the related recorded costs ratably to the tons of ore mined. Depletion is the systematic amortization of the recorded costs of the Company's mines and does not represent the decrease, if any, in the value of ore reserves as a result of ore mined.

Cost in excess of net assets acquired—The excess of purchase cost over the fair value of acquired net assets, relating to the acquisition in 1974 of ESB Ray-O-Vac Corporation, is amortized on a straight-line basis over 15 years.

Exploration—Except in areas currently under development where production is highly probable, exploration expenditures are expensed as incurred. Exploration expense totalled \$22,354,000 in 1977 and \$34,116,000 in 1976.

Research and development—Research and development expenditures, except for land, buildings and equipment, the usefulness of which extends beyond the immediate life of a project, are expensed as incurred. Research and development expense totalled \$45,438,000 in 1977 and \$38,694,000 in 1976.

Pension plans—The Company and its subsidiaries have several pension plans covering most employees. Costs are provided for, and funded, based on actuarial estimates. Past service costs at December 31, 1977 amounted to \$135,000,000, the major portion of which will be charged to operations within the next 12 years. At December 31, 1977, vested benefits approximated the assets of the pension trust funds and balance sheet accruals. The liability for pension benefits comprises cost of living supplements for pensioners and certain pension liabilities of acquired companies.

Income and mining taxes—Deferred taxes are provided for timing differences that exist in reporting depreciation and other expense and revenue items for financial statement and income and mining tax purposes. Investment tax credits are accounted for by the "flow-through" method; such credits totalled \$6,884,000 in 1977 and \$5,401,000 in 1976. The Company provides taxes on the undistributed earnings of subsidiaries to the extent such earnings are not considered to be permanently reinvested in the subsidiaries' operations.

Net earnings per common share—Net earnings per common share is calculated by dividing net earnings less preferred dividends by the weighted average number of common shares outstanding. The common stock equivalents of outstanding stock options do not dilute earnings per common share.

Note 2. Other Income

Other income includes net gains on sales of assets, interest, dividends, income from equity interests in affiliates and joint ventures, and realized exchange gains and losses which were not material.

Note 3. Marketable and Miscellaneous Securities

Marketable securities are carried at cost which approximates market. At December 31, 1977 marketable equity securities at a cost of \$1,400,000, which approximated market value, were included in marketable securities. Included principally in miscellaneous securities at December 31, 1976 were marketable equity securities at a cost of \$5,300,000, and at that date market value exceeded cost by \$12,380,000. Realized gains on marketable equity securities aggregated \$9,890,000 in 1977 and \$11,810,000 in 1976.

Note 4. Remuneration of Directors and Officers

Selling, general and administrative expenses include remuneration of directors and officers of the Company (including past officers) as follows:

Year ended December 31	1977	1976
	(in thousands)	
Aggregate remuneration – as directors (15 in 1977, 17 in 1976) paid by:		
Inco Limited	\$ 209	\$ 210
Aggregate remuneration – as officers (48 in 1977, 43 in 1976) paid or accrued by:		
Inco Limited	\$2,866	\$3,817
Subsidiaries of Inco Limited	198	204
	<u>\$3,064</u>	<u>\$4,021</u>

Number of directors who are also officers: 6 in 1977, 7 in 1976.

In addition to salaries, remuneration of officers reflects provisions for awards granted at various times in accordance with the Company's Key Employees Incentive Plan. Certain of these awards may be payable in future years based upon the market price of the Company's common shares and on the level of the Company's earnings. Provisions made from year to year with respect to these awards are based upon current year's market price of the common shares and on current year's earnings. Fluctuations in these provisions from 1976 to 1977 account for approximately half of the decrease in total remuneration.

Note 5. Inventories

Inventories consist of the following:

December 31	1977	1976
	(in thousands)	
Metals (at average cost)		
Finished and in-process	\$ 723,955	\$545,866
Supplies	98,205	90,913
	<u>822,160</u>	<u>636,779</u>
Metals (at last-in, first-out cost)		
Finished and in-process	89,489	108,074
Batteries and other products (at first-in, first-out cost)		
Finished and in-process	108,195	85,040
Raw materials and supplies	60,871	49,881
	<u>169,066</u>	<u>134,921</u>
Total	<u>\$1,080,715</u>	<u>\$879,774</u>

Note 6. Property, Plant and Equipment

Property, plant and equipment consists of the following:

December 31	1977	1976
	(in thousands)	
Mines and mining plants	\$1,014,071	\$ 971,391
Smelters	625,662	609,069
Refineries	331,709	325,123
Formed metal product facilities	325,012	299,654
Battery and related product facilities	173,344	143,540
Indonesian project, under development	730,618	494,589
Guatemalan project, under development	210,659	160,413
Other	90,590	82,940
	<u>3,501,665</u>	<u>3,086,719</u>
Accumulated depreciation	817,018	742,629
Accumulated depletion	247,906	224,675
	<u>1,064,924</u>	<u>967,304</u>
Net properties	<u>\$2,436,741</u>	<u>\$2,119,415</u>

The Indonesian and Guatemalan projects are lateritic nickel mines and related facilities currently under construction. The Company's estimate of the economic viability of the Guatemalan project, based upon current depressed nickel prices and the project's heavy reliance upon fuel oil, is that the project would operate at a loss. The longer-term economic viability of the project will depend primarily upon the future relationship of nickel prices to operating costs. The Guatemalan project and the first stage of the Indonesian project have been physically completed and the remainder of the Indonesian project is expected to be completed by mid-1978. Accordingly, starting at various times in 1978 with the expected successful completion of pre-operational testing of the facilities, interest on the direct project borrowings will be expensed as incurred. Depreciation and amortization of other project costs will not commence until the projects become operational.

Net properties at December 31, 1977 include approximately \$170 million applicable to nine standby mines in Canada, including three mines to be placed on a standby basis in 1978.

Note 7. Long-Term Debt

The Company's long-term debt consists of the following (the applicable repayment periods and weighted average interest rates as at December 31, 1977 are shown in parentheses):

December 31	1977	1976
	(in thousands)	
Inco Limited		
6.85% Debentures (1979-1993)	\$ 149,500	\$150,000
8.625% Debentures (1978-1991)	65,792	74,325
9.25% Debentures (1978-1990)	64,894	72,343
7.50% Debentures (1978)	52,007	74,325
P.T. International Nickel Indonesia		
Bank loans (8.6%) (1978-1987)	258,077	185,000
Export and supplier credits (8.4%) (1978-1989)	180,884	83,366
8.0625% Production sharing loan (1978-1986)	32,400	36,000
ESB Ray-O-Vac and subsidiaries		
Bank term loan (9.0%) (1981)	50,000	50,000
Revolving credit loans (7.8%) (1979)	25,000	20,000
8.5% Senior notes (1985-1997)	20,750	—
Other (9.0%) (1978-1997)	19,136	10,222
Exmibal		
Export and supplier credits (8.4%) (1978-1988)	64,169	34,715
International agency loans (9.5%) (1978-1988)	21,000	—
Bank loans (9.3%) (1978-1983)	20,000	10,000
Subordinated completion loan	4,000	4,000
Inco Europe Limited and subsidiaries		
Bank loan (7.7%) (1978-1982)	38,340	33,990
Other (9.6%) (1978-2002)	3,614	6,626
Inco Projects Limited		
6.75% Debentures (1985)	27,660	24,528
Other indebtedness (7.0%) (1978-2002)	7,315	1,547
	1,104,538	870,987
Long-term debt due within one year	84,850	21,418
Long-term debt	\$1,019,688	\$849,569

The long-term debt at December 31, 1977 is payable in the following currencies: 67%-U.S. dollars, 18%-Canadian dollars, 6%-U.K. sterling and 9%-other currencies.

The Company has agreed, subject to force majeure, to provide sufficient funds in the form of subordinated and senior loans to enable Exmibal to complete and thereafter to operate its nickel project up to certain specified dates. The Company has also agreed to purchase Exmibal's production at a formula price based on the price for nickel oxide sinter 75, provided however that the Company shall pay a minimum price of \$2.10 per pound of contained nickel in 1978 and 1979, and thereafter, until the formula price has risen sufficiently to sustain the project, the Company shall pay prices intended to meet Exmibal's operating and debt service costs. The Company has also agreed to make certain payments in respect of Exmibal's long-term debt if Exmibal fails to make payments when due on such debt, in return for which the Company would receive credits against its future purchases of Exmibal's production.

The Company has not extended a financial guarantee of the debt of P.T. International Nickel Indonesia. The Company has agreed, subject to force majeure, to provide sufficient funds in the form of equity and senior loans to enable the project company to achieve project completion. In addition, the Company has agreed to purchase approximately two-thirds of the project's production at a formula price based on the price for nickel oxide sinter 75.

Long-term debt maturities and sinking fund requirements for each of the five years through 1982 are: 1978—\$84,850,000; 1979—\$94,580,000; 1980—\$90,203,000; 1981—\$138,125,000; 1982—\$84,426,000. These five-year amounts include \$212,286,000 for Indonesian project borrowings and \$56,348,000 for Guatemalan project borrowings.

On January 5, 1978, the Company sold \$50,000,000 of 8¼% Notes due December 15, 1984 and \$100,000,000 of 9% Debentures due December 15, 1992. Generally the notes are not redeemable before December, 1981 and the debentures are not redeemable before December, 1984. The Company is required to repurchase these debentures, if available at a price of less than 100% of their principal amount, at an annual rate of \$2,000,000 to December, 1982, and thereafter at an annual rate of \$4,000,000 to December, 1991.

At December 31, 1977 the Company had unused lines of credit for both short-term and long-term debt amounting to \$650 million, of which \$165 million were in favor of P.T. International Nickel Indonesia, and \$280 million served as back-up lines of credit for Inco Limited's commercial paper borrowings in the United States and Canada. Following the issue by the Company of \$150 million of notes and debentures in January, 1978, the Company reduced its commercial paper back-up lines of credit by \$70 million and converted \$200 million of the remaining lines into a committed revolving and term loan facility which provides for short-term revolving credits and, at the option of the Company, five to seven year term loans. The revolving and term loan facility is available to the Company to finance its general corporate requirements and expires on January 15, 1980.

Note 8. Interest Expense

Interest expense on long-term debt was \$40,607,000 in 1977 and \$42,767,000 in 1976. In addition, all interest incurred in connection with the Indonesian and Guatemalan borrowings has been capitalized; interest capitalized in 1977 totalled \$41,081,000 and in 1976 totalled \$16,747,000.

Note 9. Income and Mining Taxes

The provisions for income and mining taxes were as follows:

Year ended December 31	1977	1976
	(in thousands)	
Future deferred	\$16,600	\$ 26,500
Current deferred	3,000	800
Total deferred taxes	19,600	27,300
Current taxes	55,894	123,121
	\$75,494	\$150,421
Canada	\$43,887	\$102,465
Other (principally United States and United Kingdom)	31,607	47,956
	\$75,494	\$150,421

The lower provision for taxes in 1977 is attributable principally to decreased earnings. Taxes were also lower in 1977 due to the decreased 1977 level of mining income in Canada, higher investment tax credits, and the introduction of an inventory allowance in Canada; such reductions were largely offset by the effect of currency translations.

The reconciliation between the combined federal-provincial statutory income tax rate in Canada and the effective income and mining tax rate follows:

Year ended December 31	1977	1976
	Percentage of pretax earnings	
Combined Canadian federal-provincial statutory income tax rate	48.5%	48.5%
Resource and depletion allowances	(15.6)	(14.2)
Adjusted income tax rate	32.9	34.3
Mining taxes	10.3	11.5
	43.2	45.8
Currency translations	5.6	(.6)
Investment tax credits	(3.9)	(1.6)
Inventory allowance	(2.3)	—
Other	.5	(.3)
Effective income and mining tax rate	43.1%	43.3%

The cumulative tax effect of timing differences relating to items of a non-current nature is shown separately as deferred income and mining taxes of \$387,200,000 in the Consolidated Balance Sheet. The cumulative tax effect of timing differences relating to items of a current nature of \$23,500,000 is included in the current liability for income and mining taxes payable.

Note 10. Stock Option Plans

The Key Employees Incentive Plan (KEIP), ratified by shareholders in 1968, authorized the granting of options to purchase up to 1,000,000 common shares at prices not less than 100% of their market value, determined in accordance with the Plan, on the day the option is granted. The Plan provides that no shares subject to option shall be purchasable prior to the expiration of one year after the date of grant nor after a period not exceeding ten years from the date of grant.

In 1974, the Company authorized the substitution of its common shares ("1974 Plan") to replace shares of common stock of ESB under options previously granted by ESB and held by certain of its key employees.

Directors who are not officers of the Company are not entitled to participate in the Plans. Changes during the year 1977 in options outstanding are summarized as follows:

	Number of Shares	
	KEIP Plan	1974 Plan
Outstanding at December 31, 1976	681,312	2,668
Exercised at average option price of \$21.10 per share (2,425 shares by officers)	(3,502)	(2,668)
Expired	(74,825)	—
Outstanding at December 31, 1977 (228,875 shares for officers)	602,985	—
Shares available for grant at December 31, 1977	382,427	—

The average option price per share of the options outstanding at December 31, 1977 was \$34.12 (range \$25.48—\$45.88).

Note 11. Preferred Shares

Authorized preferred shares of the Company totalled 30,000,000 shares at December 31, 1977.

In May 1977, the Company sold 10 million Series A Preferred Shares for an aggregate of \$250 million (Cdn.). The Series A Preferred Shares, which do not have general voting rights, have a cumulative floating rate dividend equal to half of the Canadian bank prime rate plus 1¼ per cent. The shares are redeemable at the option of the Company commencing in March, 1980 at a premium of three per cent over their \$25.00 (Cdn.) par value, such premium declining thereafter by ¾ of one per cent per annum, and are redeemable at par commencing in 1984. The shares are retractable at par, at the option of the holders, in 1987. The dividends of \$7,535,000 paid in 1977 on these preferred shares reflected an average annual dividend rate of approximately 5.5 per cent.

In December 1977, the Company sold five million 7.85% Series B Preferred Shares for an aggregate consideration of \$125 million (Cdn.). The five million Preferred Shares have general voting rights and are not redeemable before December, 1982, after which they are redeemable at a premium of four per cent over their \$25.00 (Cdn.) par value, such premium declining by 4/5 of one per cent per annum until December 1987, and redeemable at par thereafter. Commencing in July 1978, the Company is required to repurchase 150,000 Series B Preferred Shares annually, if such shares are available at a price not greater than par value.

Note 12. Common Shares

The Company has authorized 100,000,000 Class A Common Shares and 100,000,000 Class B Common Shares. The two classes are interconvertible at any time and are similar in all respects, including dividend rights, except that dividends on Class B shares may be declared payable out of "1971 capital surplus on hand" as defined in the Income Tax Act of Canada. At December 31, 1977, there were 74,593,655 common shares issued and outstanding comprised of 40,833,960 Class A shares and 33,759,695 Class B shares. At December 31, 1976 there were 74,587,485 common shares issued and outstanding comprised of 41,490,509 Class A shares and 33,096,976 Class B shares.

Note 13. Financial Data by Business Segment

Financial data by business segment for the year 1977 follows (in millions of dollars):

	Primary Metals	Formed Metal Products	Batteries and Related Products	Other	Eliminations	Total
Net sales to customers	\$ 869	\$377	\$585	\$122	\$ —	\$1,953
Intersegment sales	112	13	2	1	(128)	—
Total net sales	\$ 981	\$390	\$587	\$123	\$(128)	\$1,953
Operating earnings	\$ 193	\$ 33	\$ 16	\$ 8	\$(2)	\$ 248
Currency translation adjustments						18
General corporate expenses						(25)
Interest expense						(66)
Earnings before income and mining taxes						\$ 175
Capital expenditures	\$ 371	\$ 27	\$ 28	\$ 7	—	\$ 433
Depreciation and depletion	\$ 84	\$ 13	\$ 17	\$ 3	—	\$ 117
Identifiable assets at December 31, 1977	\$2,985*	\$506	\$456	\$ 94	\$(33)	\$4,008
Other assets						68
Total assets at December 31, 1977						\$4,076

Financial data by geographic area for the year 1977 follows (in millions of dollars):

	Canada	United States	Europe	Other	Eliminations	Total
Net sales to customers	\$ 234	\$1,011	\$567	\$ 141	\$ —	\$1,953
Transfers	725	44	8	4	(781)	—
Total net sales	\$ 959	\$1,055	\$575	\$ 145	\$(781)	\$1,953
Operating earnings	\$ 161	\$ 37	\$ 30	\$ 11	\$ 9	\$ 248
Currency translation adjustments						18
General corporate expenses						(25)
Interest expense						(66)
Earnings before income and mining taxes						\$ 175
Identifiable assets at December 31, 1977	\$1,954	\$ 771	\$373	\$1,116*	\$(206)	\$4,008
Other assets						68
Total assets at December 31, 1977						\$4,076

*Includes assets relating to the Company's nickel projects under development in Indonesia and Guatemala of \$765 million and \$226 million, respectively.

The Company's business is organized around three principal industries: primary metals, formed metal products and batteries and related products. The Company's principal primary metals are nickel and copper. Wrought nickel, high-nickel alloys in rolling mill forms, and forgings are the Company's major formed metal products. Automotive, dry-cell and industrial batteries and related products are the Company's major battery products. Other products comprise mainly safety products and fractional horsepower motors manufactured and marketed by ESB.

The Company's intersegment sales generally are made at approximate prices used for sales to unaffiliated customers. The elimination of \$2 million operating earnings represents mainly the net change in intersegment operating profit in beginning and ending inventories; the elimination of \$33 million identifiable assets, by industry, represents mainly operating profit in inventories and intersegment trade receivables at December 31, 1977. Other assets include \$51 million of investments in and advances to affiliated companies and \$17 million of corporate assets, principally cash, marketable securities and certain fixed assets.

Transfers between geographic areas generally are made at prevailing market prices, except that primary metals transfers from Canada to other primary metals locations are net of discounts. The \$1,953 million of sales to customers includes \$50 million exported from Canada and \$40 million exported from the United States. The \$725 million of transfers from Canada includes \$341 million exported to the United States and \$360 million exported to Europe. The \$206 million elimination of assets identifiable by geographic area consists mainly of intercompany trade receivables.

Net sales to customers of \$2,040 million for the year 1976, by business segment, follow (in millions of dollars): primary metals—\$1,077, formed metal products—\$365, batteries and related products—\$486 and other—\$112.

Note 14. Anti-Inflation Program

The Canadian government's anti-inflation program, which provides restraints on prices, profits, compensation and dividends, will expire over the last nine months of 1978. The Company believes that it was in compliance with the program for the years 1976 and 1977.

Note 15. Quarterly Financial Information (Unaudited)

Quarterly financial information follows (in thousands, except per share amounts):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
1977:					
Net sales	\$450,923	\$516,503	\$452,285	\$533,617	\$1,953,328
Earnings before income and mining taxes	\$ 67,655	\$ 65,954	\$ 30,916	\$ 10,828*	\$ 175,353
Net earnings	\$ 41,009	\$ 32,607	\$ 21,615	\$ 4,628	\$ 99,859
Net earnings per common share	\$.55	\$.42	\$.25	\$.02	\$ 1.24
Dividends per common share	\$.35	\$.35	\$.35	\$.20	\$ 1.25
1976:					
Net sales	\$433,703	\$516,542	\$512,173	\$577,864	\$2,040,282
Earnings before income and mining taxes	\$ 48,839	\$ 99,251	\$ 98,655	\$100,434	\$ 347,179
Net earnings	\$ 23,285	\$ 53,663	\$ 58,936	\$ 60,874	\$ 196,758
Net earnings per common share	\$.31	\$.72	\$.79	\$.82	\$ 2.64
Dividends per common share	\$.35	\$.35	\$.35	\$.55	\$ 1.60

*After required provision of \$18,530,000 for separation costs at various locations and plant shutdown expenses.

Note 16. Replacement Cost Information (Unaudited)

In accordance with regulations issued by the U.S. Securities and Exchange Commission in March 1976, many companies are required to disclose current replacement cost data relative to productive capacity, depreciation and depletion, inventories and costs. For mineral resource assets and certain assets located outside of North America and the countries of the European Economic Community, however, this requirement was delayed for one year. With respect to 1976, therefore, replacement cost was reported primarily for the productive capacity (and the related depreciation) of ESB and those subsidiaries engaged in the manufacture of formed metal products.

In October, 1977, the Securities and Exchange Commission defined mineral resource assets to include buildings, machinery and equipment used in mining operations. This definition excludes capitalized costs related to (1) acquisition of mineral rights, leases or properties, (2) exploration and (3) development of ore bodies.

Replacement of productive capacity has generally required a substantially larger investment than the original cost of the assets being replaced, reflecting the cumulative impact of inflation over the generally lengthy period during which the assets were in service.

Historically, the Company has been able to maintain its profit margins on its primary metals and formed metal products. However, in 1975 and 1976, these margins were reduced primarily as a result of escalating production costs coupled with weaker copper prices. In 1977, profit margins deteriorated further due to a weakening in nickel prices and steadily increasing unit costs and expenses. Copper prices remained depressed. Since its acquisition in 1974, ESB has generally maintained or improved the profit margins on its products, except that such profit margins decreased in 1977 due primarily to the failure to recover cost increases because of competitive pressures.

Quantified replacement cost data will be disclosed in the Company's 1977 Annual Report on Form 10-K to be filed with the Securities and Exchange Commission.

End of Explanatory Financial Section

Pension Trust Funds

The Company and its subsidiaries have several pension plans covering most employees. Irrevocable pension trust funds, which are separate and distinct from the accounts of the Company and its subsidiaries, have been established to implement most of these pension plans. The funds consist of Government bonds and other marketable securities at cost, cash and other assets. Trust fund operations are summarized as follows:

Year ended December 31	1977	1976
	(in thousands)	
Balance in funds at beginning of year	\$381,389	\$341,706
Company contributions	44,392	44,018
Employee contributions	317	324
Income from investments	31,151	26,174
Currency translation adjustments*	(14,928)	(3,184)
	442,321	409,038
Benefits paid	29,518	27,649
Balance in funds at end of year	\$412,803	\$381,389
Market value of funds at end of year	\$455,100	\$426,000

*Currency translation adjustments result from translating assets in Canadian and other currencies into U.S. dollars at year-end exchange rates.

Market price range per common share

Year ended December 31	1977	1976
New York Stock Exchange		
First quarter	\$34 —29½	\$35 —25½
Second quarter	31¾—25½	37 —31½
Third quarter	26½—19¼	36¼—32½
Fourth quarter	20 —14¾	33½—28½
Toronto Stock Exchange		
(Canadian dollars)		
First quarter	\$34½—31½	\$34¾—25½
Second quarter	33½—27¼	35½—31½
Third quarter	28¼—20¾	35¼—32
Fourth quarter	21½—16¼	33¾—28½

A copy of the 1977 Annual Report on Form 10-K to be filed with the United States Securities and Exchange Commission may be obtained from the Company upon request. Requests should be addressed to The Secretary, Inco Limited at 1 First Canadian Place, Toronto, Ontario M5X 1C4 or at One New York Plaza, New York, New York 10004.

Management's Discussion and Analysis of the Summary of Operations

In 1974, the Company experienced unprecedented worldwide demand for its metals. Sales of primary metals were \$1,153 million, as deliveries of nickel and copper reached an all-time high. Record deliveries of formed metal products resulted in sales of \$298 million. Also in 1974, the Company inaugurated a program to reduce dependence on its traditional business by diversifying into other fields. The Company entered into the battery industry with the acquisition of ESB Incorporated (now ESB Ray-O-Vac Corporation) for \$234 million, effective August 1, 1974. During the five months subsequent to its acquisition in 1974, ESB Ray-O-Vac had sales of \$234 million.

World demand for nickel fell sharply in 1975. The resultant decrease in the Company's nickel deliveries, coupled with a 29-cent-a-pound decrease in the average price realized on copper deliveries, was primarily responsible for primary metals sales declining to \$828 million in 1975. This decline was moderated by improved prices for nickel. Sales of formed metal products increased to \$370 million in 1975 as a result of improved prices and a \$26 million contribution to sales from Daniel Doncaster & Sons Limited subsequent to its acquisition effective August 17, 1975. ESB's sales for the year 1975 were \$497 million.

Primary metals sales rose to \$1,077 million in 1976 on the strength of increased deliveries of nickel and precious metals and improved prices for nickel and copper. Sales of formed metal products totalled \$365 million as the effect of a reduced level of business was almost entirely offset by Doncaster's \$61 million contribution to sales for the full year. ESB Ray-O-Vac's sales of batteries and other products reached a record \$598 million in 1976, an increase of 20 per cent over 1975, reflecting a high level of demand for its products throughout the year.

Primary metals sales were \$869 million in 1977, or 19 per cent below 1976, due mainly to reduced deliveries of nickel resulting from intensely competitive conditions during a period of depressed levels of demand stemming from unexpected weakness in key nickel-consuming capital goods spending, increased utilization of nickel-containing scrap by consumers, and the reduction of nickel inventories held by consumers. Sales of formed metal products in 1977 increased three per cent to \$377 million due to improved prices. ESB Ray-O-Vac's sales for 1977 were \$706 million, an increase of 18 per cent over 1976. Approximately one-third of this increase was contributed by AB Tudor of Sweden, a company acquired effective January 31, 1977, with the balance attributable principally to higher prices.

Changes in the level of costs throughout these periods, although primarily attributable to the different volumes of business, reflect the constant pressure of escalating labor, supply and energy costs. Additionally, costs for the year 1977 were adversely affected by required provisions for separation costs related to employment reductions, principally in the primary metals business. Brief strikes at the Ontario Division in 1975 adversely affected costs disproportionately to the time periods involved.

In 1975, taxes other than income and mining taxes increased by \$14 million over 1974, basically as a result of recognizing ESB Ray-O-Vac's operations for the full year. These taxes increased by \$22 million in 1976 and by \$15 million in 1977 due mainly to higher payroll taxes. Interest expense increased \$17 million in 1976, consistent with the increase in notes payable. Pension expense increased \$15 million in 1976 partly due to improved benefits and

increased \$6 million in 1977 primarily because of a required provision relative to the closing of an industrial battery plant.

Currency translation adjustments, which in the Company's case arise mainly from fluctuations in the relative values of the Canadian dollar, pound sterling and the U.S. dollar, increased earnings by \$14 million, \$2 million and \$18 million, respectively, in the years 1975, 1976 and 1977.

In the period 1974 through 1977 almost 75 per cent of the Company's aggregate income and mining tax expense related to Canadian operations. The Canadian tax system was altered substantially in 1974 as changes in Canadian federal income taxes and Ontario mining and Manitoba royalty taxes became effective during the year, resulting in a higher level of taxation on the mining industry in Canada. Since 1974, changes in the Company's income and mining tax expense have essentially been consistent with changes in the levels of earnings from year to year.

In May 1977, the Company sold 10 million Series A Preferred Shares to a limited number of Canadian institutional investors for \$250 million (Cdn.). These shares have a cumulative floating rate dividend equal to half the Canadian prime rate plus 1¼ per cent. In December 1977, the Company sold five million 7.85% Series B Preferred Shares to the public in Canada for \$125 million (Cdn.). In 1977, dividends totalling \$7.5 million were paid on Series A Preferred Shares.

In early January 1978, the Company raised \$150 million in the Eurobond market through the issue of \$50 million 8¼% Notes due in 1984 and \$100 million 9% Debentures due in 1992.

On January 30, 1978, entry of a court-approved consent decree terminated the U.S. Department of Justice's antitrust suit challenging the Company's acquisition of ESB Ray-O-Vac and resolved all of the issues in the litigation.

The Company's Consolidated Balance Sheet at December 31, 1977 included total assets of \$765 million and \$226 million relative to the lateritic nickel projects in Indonesia and Guatemala, respectively. All expenditures relating to these projects have been capitalized. The Guatemalan project and the first stage of the Indonesian project have been physically completed and the remainder of the Indonesian project is expected to be completed by mid-1978. Accordingly, starting at various times in 1978 with the expected successful completion of pre-operational testing of the facilities, interest on the direct project borrowings will be expensed as incurred. However, consolidated earnings will not reflect the operating results of these projects until sales are made subsequent to the achievement of commercial production levels.

Based upon current depressed nickel prices and the project's heavy reliance upon fuel oil, the Company estimates that the Exmibal project in Guatemala would operate at a loss. The longer-term viability of the project will depend primarily upon the future relationship of nickel prices to operating costs. With respect to the Indonesian project, the Company believes that, given the favorable grade of ore and the availability of hydro-electric power, the project, when operating at or near capacity, will be profitable based upon current price/cost relationships.

Ten-Year Review

	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968
Summary of operations										
(in thousands)										
Net sales	\$1,953,300	2,040,300	1,694,800	1,684,600	1,172,800	900,300	789,200	1,055,800	684,200	767,300
Costs (1)	\$1,399,700	1,324,600	1,071,600	888,400	643,300	594,400	525,300	619,200	431,400	470,500
Interest, net of amounts capitalized	\$ 66,300	66,400	49,400	45,000	42,300	43,800	33,900	17,100	13,400	6,500
Income and mining taxes	\$ 75,500	150,400	135,200	248,400	120,500	42,600	23,500	121,400	58,100	87,200
Net earnings	\$ 99,900	196,800	186,900	298,600	225,600	112,100	90,300	207,400	115,200	140,800
Per common share	\$ 1.24	2.64	2.51	4.01	3.02	1.50	1.21	2.78	1.54	1.89
Common dividends	\$ 93,200	119,300	119,300	119,300	89,400	74,500	96,900	104,200	89,300	91,500
Per common share	\$ 1.25	1.60	1.60	1.60	1.20	1.00	1.30	1.40	1.20	1.23
Common shares outstanding (weighted average)	74,593	74,576	74,552	74,541	74,535	74,525	74,499	74,435	74,401	74,363
Other financial data (in thousands)										
Capital expenditures (2)	\$ 432,800	459,100	332,700	149,200	88,800	125,200	244,200	272,500	175,200	175,400
Exploration expenditures (2)	\$ 23,800	36,100	30,100	19,900	17,800	18,700	32,900	31,900	19,900	17,000
Research and development expense	\$ 45,400	38,700	36,300	31,500	24,300	23,300	24,700	22,400	18,000	17,400
Working capital	\$ 826,200	595,300	589,500	648,000	537,800	395,700	387,300	375,800	356,300	430,800
Net property, plant and equipment	\$2,436,700	2,119,400	1,785,000	1,560,200	1,395,400	1,402,200	1,351,900	1,167,700	940,000	798,300
Total assets (3)	\$4,075,800	3,628,300	3,025,700	2,799,700	2,248,800	2,078,300	2,094,800	1,827,400	1,477,000	1,396,200
Common shareholders' equity	\$1,561,600	1,562,400	1,484,400	1,416,400	1,236,900	1,100,700	1,062,800	1,067,900	963,100	936,300
Return on total assets	2.5%	5.4%	6.2%	10.7%	10.0%	5.4%	4.3%	11.3%	7.8%	10.1%
Return on common shareholders' equity	5.9%	12.6%	12.6%	21.1%	18.2%	10.2%	8.5%	19.4%	12.0%	15.0%
Operating data (in thousands)										
Ore mined—short tons	19,600	19,800	21,200	22,000	19,700	19,200	27,600	27,700	18,300	24,300
Nickel production—pounds (4)	416,700	461,600	458,900	509,600	469,200	401,200	463,400	500,900	342,000	436,400
Nickel deliveries—pounds (4)	312,300	409,800	351,100	549,100	517,000	425,100	342,500	518,900	382,200	480,800
Copper deliveries—pounds	341,200	356,000	334,600	367,200	327,100	308,200	340,300	348,100	208,200	314,200
Platinum-group metals and gold deliveries— troy ounces	438	554	301	317	413	452	437	388	422	441
Other statistics										
Employees	56,922	55,767	53,515	48,962	31,311	32,082	36,089	37,313	34,321	33,314
Common shareholders	77,875	78,014	84,369	86,795	90,660	92,024	92,217	84,320	84,219	75,587

(1) As in the Company's classification of costs in the Consolidated Statement of Earnings.

(2) Includes capitalized exploration expenditures.

(3) Does not include any value for the minerals in the major portion of the Company's ore reserves.

(4) In years prior to 1972, the Company purchased finished nickel from various sources which is not included in nickel production. Resales of such nickel are included in nickel deliveries.

Directors

(Term expires 1978)

Harold Bridges

Former President and Chief Executive Officer
Shell Oil Company, Houston, Texas

J. Edwin Carter

Chairman of the Board and Chief Executive Officer

Peter D. Curry

President, Power Corporation of Canada, Limited, Montreal
(investment, management and transportation)

Albert P. Gagnebin

Former Chairman of the Board

J. Peter Gordon

Chairman of the Board and Chief Executive Officer
The Steel Company of Canada, Limited, Toronto

Allen T. Lambert, O.C.

Chairman of the Board
The Toronto-Dominion Bank, Toronto

Ian McDougall

Senior Vice-President

The Rt. Hon. Lord Nelson of Stafford

Chairman of the Board
The General Electric Company Limited, London, England

George T. Richardson

President, James Richardson & Sons, Limited, Winnipeg
(financial, grain and management holding company)

Lucien G. Rolland

President, Rolland Paper Company, Limited, Montreal

Ashby McC. Sutherland

Senior Vice-President

(Term expires 1979)

Charles F. Baird

President

David W. Barr

Chairman of the Board, Moore Corporation Limited, Toronto
(business forms)

Robert W. Bonner, Q.C.

Chairman of the British Columbia Hydro & Power Authority

Wm. Ward Foshay

Lawyer—Partner in the firm of Sullivan & Cromwell, New York

Reva Gerstein, C.M.

Psychologist and educator

G. Arnold Hart, M.B.E.

Director, Bank of Montreal, Montreal

John McCreedy

Chairman and Chief Executive Officer, Inco Metals Company

William Steven

Senior Vice-President

Donald G. Willmot

Chairman of the Board, The Molson Companies Limited, Toronto
(brewing, retailing and diversified manufacturing)

Samuel H. Woolley

Former Chairman of the Board, The Bank of New York, New York

Executive Committee

J. Edwin Carter, Chairman

Charles F. Baird

David W. Barr

Wm. Ward Foshay

G. Arnold Hart, M.B.E.

Allen T. Lambert, O.C.

Donald G. Willmot

Audit Committee

Samuel H. Woolley, Chairman

David W. Barr

J. Peter Gordon

Allen T. Lambert, O.C.

Lucien G. Rolland

Pension Committee

Peter D. Curry, Chairman

Wm. Ward Foshay

The Rt. Hon. Lord Nelson of Stafford

George T. Richardson

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Charles F. Baird

President

Ian McDougall

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William Steven

Senior Vice-President

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Comptroller

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Vice-President

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Chief Legal Officer

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Vice-President

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President

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Tokyo



MEDIA
INFORMATION

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FOR IMMEDIATE RELEASE

INCO CHAIRMAN AND PRESIDENT, IN ANNUAL REPORT MESSAGE,
CALL 1977 A DISAPPOINTING YEAR, REAFFIRM CONFIDENCE
IN COMPANY'S STRENGTH AND LONG-TERM FUTURE

- - - - -

Although 1977 was "one of the most disappointing years" in Inco Limited's history, chairman and chief executive officer J. Edwin Carter and Charles F. Baird, president, express confidence in the company's long-term future.

"We remain convinced that nickel is not going out of style," they say in Inco Limited's 1977 annual report, which is being mailed to shareholders today.

"We believe there will be some increase in the demand for nickel in 1978, but it continues to be extremely difficult to foresee market developments."

The report stresses that the company took corrective actions in 1977 to slow and reverse the deterioration in its primary metals business and to maintain Inco's financial strength. The objective of these actions was to conserve cash.

"We are confident that the actions which we have taken, and the additional ones which we are fully prepared to take if circumstances require, will maintain Inco as the most commercially reliable and economically efficient nickel producer in the world," Messrs. Carter and Baird conclude in their message to shareholders.

- more -

NOTE: All monetary figures expressed in U.S. currency.

INCO LIMITED Copper Cliff, Ontario P0M 1N0
For further information contact Ray Gilbert, Public Affairs Supervisor,
or Harry Tompkins, Director, Public Affairs Department. (705) 682-0631.

Explaining the cash conservation moves, Messrs. Carter and Baird say, "Cash conservation actions have not been confined to Inco Metals (the company's primary metals unit). They have been implemented throughout the Inco organization. Planned capital expenditures have been sharply reduced. Operating expenditures are being brought under even tighter control. This has led inevitably to unfortunate but essential reductions in employment. Additionally, your Board of Directors decided last October that present and forecast future conditions required that the amount of the regular quarterly dividend on common shares be substantially reduced commencing in the fourth quarter and that no extra dividend be paid in 1977."

They stress, "Many of the actions taken have involved difficult decisions. This is particularly true of the reduction in employment at many Inco locations in countries around the world. We regret the impact on the individuals affected, the loss to Inco of their skills and the consequential effect on the communities in which we operate. It is true, however, that these communities, specifically those in Canada, have greatly benefitted over an extended period from the maintenance of Inco production and employment at levels which, by hindsight, were not justified."

Referring to the inquiry into the company's production curtailments and layoffs in Ontario by a select committee of the Legislative Assembly of Ontario, Messrs. Carter and Baird say, "This public inquiry into the specifics of the business judgments and decisions of a private company in a particular individual instance may well be an unprecedented political action, which has troubled many in Canada and abroad, including many in governments. It has, however, provided us with a forum to deal with the facts of international economic life as they relate to the nickel industry, and we believe that this has contributed to better public and governmental understanding of these facts."

Messrs. Carter and Baird caution that, over the next decade, past growth rates in world nickel consumption may not be maintained. These had averaged six per cent annually from 1946 to 1976. They cite among reasons for the possibility that long-term economic growth rates among industrialized countries may be reduced: the oil crisis, transfer of financial resources to the OPEC nations, the increase in the level of inflation and the increasing impact of environmental regulations.

They point out that, at present, total nickel production capacity in the non-communist world is about 1,500 million pounds per year. This includes Inco's approximately 460-million-pound Canadian capacity, as it is currently limited by environmental constraints. By 1980, the total capacity could rise to about 1,700 million pounds annually, including the approximately 130-million-pound capacity of Inco's Indonesian and Guatemalan projects.

Although such capacities are far above current needs, they say, in the future, full capacity production from Inco's Canadian operations, as well as from the projects in Indonesia and Guatemala, will be needed to meet an increasing world nickel demand.

Inco Limited reported its sales and earnings for 1977 on February 6, 1978. Net sales for 1977 were \$1,953 million compared with \$2,040 million in 1976, a decrease of four per cent. Net earnings in 1977 were \$99.9 million, or \$1.24 a common share, compared with \$196.8 million, or \$2.64 a share, in 1976.

Finished nickel inventory at year-end totalled 341 million pounds, 29 million pounds more than the company sold in 1977 and very substantially in excess of the 100-million-pound level considered normal. Inco's finished nickel inventory consisted solely of nickel from Canadian sources.

Nickel production in 1977 was 417 million pounds, while nickel deliveries--including nickel contained in deliveries of formed metal products--were 312 million pounds, a decrease of 24 per cent from total deliveries in 1976.

The average net price per pound realized for the company's various primary nickel products for the full year of 1977 was \$2.17, compared with \$2.15 in 1976. Inco's current average net realized price is at substantially the level of 1975, which, as noted in the report, was \$2.00 a pound.

Capital expenditures in 1977 totalled \$433 million, compared with \$459 million in 1976. Approximately two-thirds of the 1977 expenditures were for the Indonesian and Guatemalan projects, which were financed to a great extent by long-term loans arranged by the company's Indonesian and Guatemalan subsidiaries. The major portion of the balance of the year's expenditures was spent in Canada. In 1978, the report notes, capital expenditures will decline sharply to approximately \$220 million with the expected physical completion of the Indonesian project.

The report shows that Inco Limited's income and mining tax expenses, consistent with the decline in pretax earnings, declined from \$150 million in 1976 to \$75 million in 1977. The company's effective income tax and mining tax rate for 1977 was 43 per cent, the same as 1976.

The report states that shareholders will be asked, at the company's annual meeting on April 19, to approve a bylaw which provides that the company may offer holders of common shares the right to elect to receive, in lieu of a cash dividend, a stock dividend in the form of common shares commencing in 1979. Full details of this bylaw will be contained in the company's 1978 Information Circular and Proxy Statement, which will be mailed to shareholders early in March 1978.

The company's 1977 annual report reflects the completion in 1977 of the organization of its business around the company's three principal product groups--primary metals; formed metal products; batteries and related products.

Inco's production of copper in 1977 totalled 328 million pounds, compared with 345 million pounds in 1976. Copper deliveries of 341 million pounds in 1977 were four per cent lower than the previous year. For copper, in 1977, the company realized 63 cents a pounds, on average, compared with 65 cents a pound in 1976.

Sales of the platinum-group metals and gold and of silver, at \$63 million, were approximately 11 per cent higher than in 1976.

Net sales of the Formed Metals Products Group in 1977, the report states, were \$377 million, up three per cent over 1976. Rolling mill deliveries during the year totalled 88 million pounds, compared with 91 million pounds in 1976. The formed metal products delivered to customers in 1977 contained 55 million pounds of Inco nickel purchased at prevailing market prices.

A reorganization of ESB Incorporated, effective January 1, 1978, created a holding-company structure for this wholly owned Inco Limited subsidiary, the report states. The company was renamed ESB Ray-O-Vac Corporation. Sales by ESB Ray-O-Vac were \$706 million in 1977, compared with \$598 million in 1976. Of this 18 per cent increase in sales, approximately one-third was attributable to the inclusion of sales of AB Tudor of Sweden, a company acquired in January 1977.

The company's venture capital investment portfolio was profitable in 1977, according to the report. It has grown to about \$7 million and represents minority positions in 20 businesses, principally high-technology companies.

At year-end 1977, the report states, Inco Limited had 77,875 Common shareholders of record and 924 Preferred shareholders of record, compared with 78,014 Common shareholders of record on December 31, 1976. Of the shares having general voting rights, i.e., the Common Shares and the Series B Preferred Shares, Canadian residents of record held 53 per cent, United States residents of record 33 per cent, and residents in other countries 14 per cent.

February 28, 1978

INCO

**Second Quarter
Report
1977**

INCO

Executive Offices

1 First Canadian Place, Toronto, Ontario M5X 1C4
One New York Plaza, New York, N.Y. 10004, U.S.A.

INCO LIMITED

Printed in Canada

To the Shareholders:

The Company's earnings for the second quarter of 1977 were \$32.6 million, or 42 cents a common share, compared with earnings of \$53.6 million, or 72 cents a share, for the second quarter of 1976. Earnings for the first six months of 1977 were \$73.6 million, or 97 cents a common share, compared with earnings of \$76.9 million, or \$1.03 a share, in the corresponding period of 1976.

Net sales for the second quarter totalled \$516.5 million, the same as for the second quarter of 1976. Sales for the first six months amounted to \$967.4 million, compared with \$950.2 million for the corresponding period last year. Sales by ESB Incorporated accounted for 33 per cent of the Company's first half 1977 sales and for 29 per cent of first half 1976 sales.

This year's second quarter and first half earnings, as compared with the same periods last year, were adversely affected principally by lower deliveries of primary nickel and platinum-group metals and by continuing increases in unit costs and expenses, which outpaced improved prices, in our metals business. Additionally, ESB's contribution to earnings declined primarily due to nonrecurring factors. Of major benefit to this year's first half earnings were currency translation adjustments which resulted in a credit to earnings of \$15.6 million, or 21 cents a share, essentially all of which occurred in the first quarter, due mainly to the decline in the value of the Canadian dollar relative to the U.S. dollar as it affected the translation of the Company's borrowings and other liabilities payable in Canadian dollars. In the first half of 1976, currency translation adjustments resulted in a charge against earnings of \$14.5 million, or 19 cents a share, reflecting the increase in the relative value of the Canadian dollar during that period.

In the first six months, deliveries of nickel in all forms amounted to 161 million pounds, compared with 176 million pounds in the comparable period in 1976. Copper deliveries totalled 173 million pounds in the first six months, compared with 193 million pounds in the first half of last year.

Deliveries of nickel have not increased as anticipated because of a continuing lag in investment in new plant and equipment, particularly in those industries that most contribute to nickel consumption, and because of extraordinarily in-

tense competition. Realized nickel prices, although slightly higher than last year, have also been lower than projected for the same reasons. Although combined producer and consumer inventories are at record levels, industry-wide production is now essentially in balance with consumption. However, in view of current conditions in the nickel market together with continuing weakness in copper prices, we believe, contrary to our earlier expectations, that 1977 earnings will not match the 1976 level.

The lower than expected nickel deliveries have also resulted in further accumulation in 1977 of inventory in excess of normal operating requirements, thus adding to the inventory buildups which occurred in 1975 and 1976. We consider this building of excess stocks to be a sound investment if there is a reasonable expectation that the nickel will be required by the market in the not too distant future. We also consider it a prudent and responsible means of providing, within the limits of realistically viewed business capability, stable employment in the communities in which we produce. The policy can only be maintained when there is a reasonable expectation that inventory will be reduced to normal levels within the particular business cycle. However, as previously noted, combined producer and consumer inventories are at record levels, and, while we remain confident as to the future growth of the nickel market, current conditions necessitate modification of this year's production goals. In Canada we are not replacing all employees lost through normal attrition. In Indonesia delays experienced in start-up will also result in less production than previously planned. No finished nickel production from Guatemalan sources was scheduled for 1977.

On May 2, 1977, the Company completed the sale of 10 million Series A Floating Rate Preferred Shares for \$250 million (Cdn.). The sale was made to 16 Canadian institutional investors. Proceeds from the sale of the preferred shares were used primarily to reduce the Company's short-term borrowing requirements. The initial dividend on the preferred shares was paid on June 1 at an annual rate of 5.915 per cent.

In July, The International Metals Reclamation Company, Inc. (INMETCO) completed arrangements for a \$27 million long-term industrial development loan for its plant being constructed near Pittsburgh, Pennsylvania. INMETCO, which

Consolidated Financial Statements - June 30, 1977

(In Thousands of Dollars)

Statement of Earnings

	Second Quarter		Six Months	
	1977	1976	1977	1976
Net sales	\$516,503	\$516,542	\$967,426	\$950,245
Other income	9,142	11,842	15,171	17,707
	<u>525,645</u>	<u>528,384</u>	<u>982,597</u>	<u>967,952</u>
Costs	350,162	326,281	653,994	608,221
Selling, general and administrative expenses	49,252	42,668	92,567	82,563
Depreciation and depletion	28,927	28,392	56,902	57,246
Interest expense	16,508	16,295	33,263	31,676
Pension expense	14,024	12,964	27,845	25,642
Currency translation adjustments	818	2,533	(15,583)	14,514
	<u>459,691</u>	<u>429,133</u>	<u>848,988</u>	<u>819,862</u>
Earnings before income and mining taxes	65,954	99,251	133,609	148,090
Income and mining taxes	33,347	45,588	59,993	71,142
Net earnings	<u>\$ 32,607</u>	<u>\$ 53,663</u>	<u>\$ 73,616</u>	<u>\$ 76,948</u>
Net earnings per common share	\$0.42	\$0.72	\$0.97	\$1.03
Common shares outstanding at end of period	74,593,755	74,573,761	74,593,755	74,573,761

Balance Sheet

	June 30, 1977	Dec. 31, 1976		June 30, 1977	Dec. 31, 1976
Cash and securities	\$ 94,837	\$ 72,873	Notes payable	\$ 392,528	\$ 401,998
Accounts receivable	380,253	432,941	Accounts payable	293,133	306,980
Inventories	1,034,773	879,774	Current taxes payable ..	61,064	91,572
Prepaid expenses	<u>17,611</u>	<u>10,268</u>	Total current liabilities.	<u>746,725</u>	<u>800,550</u>
Total current assets ..	1,527,474	1,395,856	Long-term debt	920,531	849,569
Property, plant and equipment (net)	2,275,328	2,119,415	Deferred taxes	378,300	368,800
Cost in excess of net assets acquired ..	36,460	38,990	Other liabilities	56,004	47,027
Other assets	84,285	74,050	Preferred shares	239,250	—
	<u>\$3,923,547</u>	<u>\$3,628,311</u>	Common shares	97,020	96,887
			Retained earnings and capital surplus	<u>1,485,717</u>	<u>1,465,478</u>
				<u>\$3,923,547</u>	<u>\$3,628,311</u>

Statement of Changes in Financial Position

Six Months

Financial resources were provided by	1977	1976
Net earnings	\$ 73,616	\$ 76,948
Depreciation and depletion	56,902	57,246
Deferred income and mining taxes	7,700	11,200
Net proceeds from sale of preferred shares	238,293	—
Long-term borrowings—net	69,106	122,418
Currency translation adjustments not affecting working capital	(11,043)	6,329
Other—net	10,144	6,647
Total	<u>444,718</u>	<u>280,788</u>
Financial resources were used for		
Capital expenditures	205,898	215,830
Dividends paid to shareholders	53,377	52,198
Total	<u>259,275</u>	<u>268,028</u>
Increase in working capital	<u>\$185,443</u>	<u>\$ 12,760</u>

These statements are expressed in United States currency and are subject to year-end audit and adjustments.

will convert specialty steelmaking waste into a saleable remelt alloy, is scheduled to begin operations in mid-1978.

On July 12, President Kjell Eugenio Laugerud Garcia of the Republic of Guatemala inaugurated the Company's majority-owned Exmibal nickel project on the shores of Lake Izabal.

The Board of Directors today declared a quarterly dividend of 35 cents (U.S.) a common share, payable September 1 to Class A and Class B shareholders of record on August 3. Dividends of 35 cents (U.S.) a common share were paid in March and June of this year. The dividend on the Class B Common Shares was declared payable out of "1971 capital surplus on hand" as defined in the Income Tax Act of Canada. The Board of Directors also declared a quarterly dividend at an annual rate of 5.625 per cent on the Company's Series A Preferred Shares, payable September 1 to shareholders of record on August 22.

Commencing September 1, 1977, the Company's Transfer Agent in the United States will be Morgan Guaranty Trust Company of New York, 30 West Broadway, New York, New York 10015. Also commencing September 1, 1977, Inco will act as Transfer Agent in respect of the issue of new certificates to replace lost, destroyed, stolen or mutilated certificates. Accordingly, communications regarding these matters should be addressed to the Office of the Secretary, INCO LIMITED, at either P.O. Box 44, 1 First Canadian Place, Toronto, Ontario M5X 1C4, or at One New York Plaza, New York, New York 10004.

J. Edwin Carter

Chairman and Chief Executive Officer

Charles F. Baird

President

July 21, 1977